AIRPOWER SUPPORT TO UNCONVENTIONAL WARFARE

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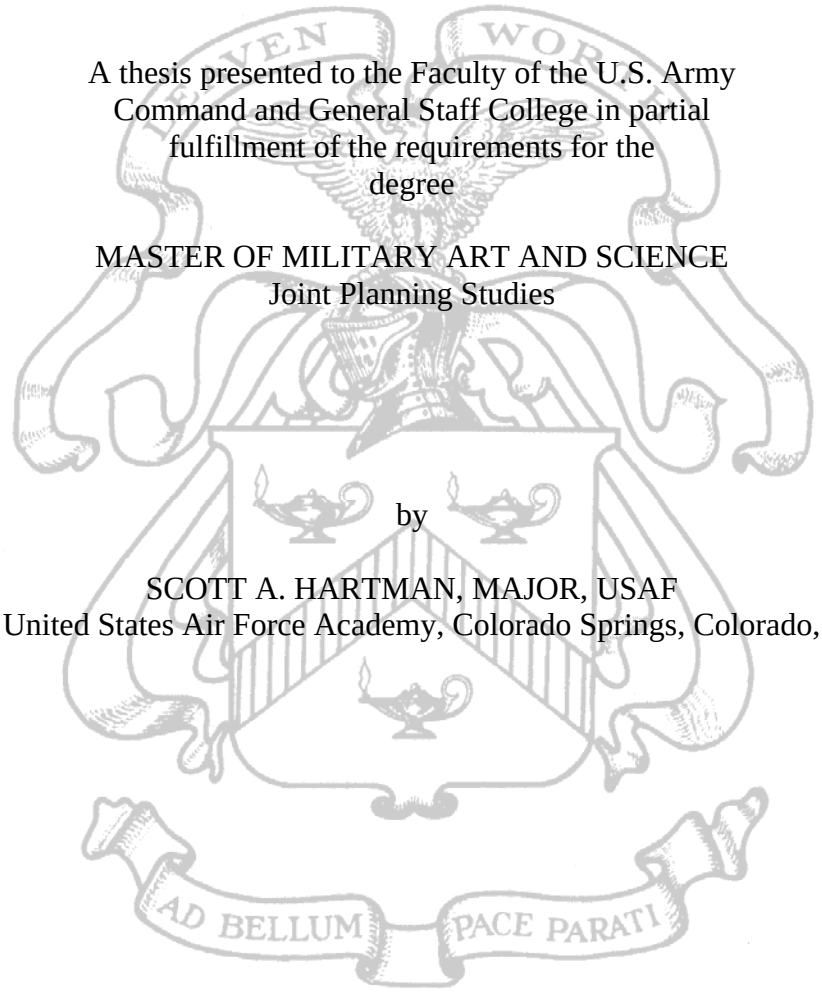

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This thesis examines the current ability of Special Operations Forces to conduct UW with air support, specifically air support provided by Air Force Special Operations Command (AFSOC). This thesis examines the questions--Does AFSOC currently have airpower assets with the capability to support UW operations with mobility, resupply, and fires?

Three case studies were used to examine airpowers role in UW: Allied support to the French resistance in WWII, United States support to the Hmong during the conflict in Laos and a hypothetical scenario using AFSOC's current capabilities. The three case studies were examined using the evaluation criteria of effectiveness, efficiency and unity of effort. The analysis found that AFSOC could currently support UW operations, but effectiveness would be limited by a number of factors.

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ABSTRACT

AIRPOWER SUPPORT TO UNCONVENTIONAL WARFARE, by Major Scott A. Hartman, 93 pages.

With the development of the “long war,” the U.S. military’s focus has shifted dramatically from its traditional emphasis on conventional operations to irregular and indirect approaches to safeguard America’s vital interests. One of the least understood aspects of Irregular Warfare is Unconventional Warfare (UW), which includes operations conducted through, with or by indigenous forces and provides the U.S. with an indirect means of accomplishing its objectives.

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ACRONYMS

AAF	Allied Air Forces
AFDD	Air Force Doctrine Document
AFSOC	Air Force Special Operations Command
AFSOF	Air Force Special Operations Forces
CAA	Combat Aviation Advisor
CIA	Central Intelligence Agency
COI	Office of the Coordinator of Information
COIN	Counterinsurgency
GAAT	Georgia, Armenia, Azerbaijan, and Turkey
ISR	Intelligence, Surveillance and Reconnaissance
IW	Irregular Warfare
JFACC	Joint Force Air Component Commander
JFC	Joint Force Commander
JFSOCC	Joint Force Special Operations Component Commander
JP	Joint Publication
MAAF	Mediterranean Allied Air Forces
MTO	Mediterranean Theater of Operation
OSS	Office of Strategic Services
PSYOP	Psychological Operations
RAF	Royal Air Force
SOAR	Special Operations Aviation Regiment
SOCOM	Special Operations Command
SOE	Special Operations Executive

SOF	Special Operations Forces
USAAF	United States Army Air Forces
USAF	United States Air Force
USAID	United States Agency for International Development
UW	Unconventional Warfare

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CHAPTER 1

INTRODUCTION

The role of the U.S. military has changed significantly since the terrorist attacks of 11 September 2001, and has changed the military's focus to what the Quadrennial Defense Review calls the "long war." This "long war" is "irregular in its nature" and has taken the U.S. military away from its traditional emphasis on conventional operations because "this war requires the U.S. military to adopt unconventional and indirect approaches" to safeguard America's vital interests (QDR 2006, 1). Recent conflicts clearly illustrate this point as both conventional and Special Operations Forces (SOF) find themselves in bitter counterinsurgency (COIN) environments. Because of the lack of emphasis before September 11th by the U.S. military on irregular warfare (IW), much effort has been expended in rediscovering the forgotten aspects of COIN, from both a ground and an air perspective. While this concentration on COIN is desperately needed, other aspects of IW should not be neglected. On the other end of the IW spectrum from COIN is unconventional warfare (UW), an indirect approach to advancing U.S. national interests.

Background

IW is a broad range of violent conflict concerned with gaining influence and legitimacy over a relevant population, as opposed to conventional warfare which concentrates on the forceful influence of an opposing military, and by extension its government. Because IW is concerned with influencing the population, it tends to be indirect and asymmetrical in nature, and as a result much more difficult to execute than

conventional operations. A number of operations and activities constitute IW, but the majority of activities are connected to insurgency or COIN operations.

Performing COIN operations and supporting an insurgency are at opposite ends of the irregular warfare spectrum. COIN is the aspect of IW concerned with defeating an insurgency or resistance movement, and describes the current conflict in Iraq. UW, on the other hand, are operations conducted through, with or by indigenous forces that are somehow aided by an outside government, usually so they can act as an insurgency against a constituted government. The Northern Alliance overthrow of the Taliban with U.S. assistance is a recent example of UW.

UW advances U.S. interests in several ways, but it is also a tool that must be used carefully. UW is used to significantly degrade an adversary's capabilities, to make him more vulnerable to a conventional military attack or more susceptible to political coercion (Grvdovic 2008, 2). UW can be used as part of an overall military campaign, as the Kurds were used to hold 12 Iraqi divisions in place during Operation Iraqi Freedom, or as part of a stand-alone operation with no intention of using conventional U.S. military forces, for example the U.S. support to the Mujahedeen against the Soviets in Afghanistan. The use of UW must be considered carefully, because, due to the nature of insurgencies, it will have significant risks. UW basically introduces instability into a region, which may have significant impacts after the immediate strategic objectives have been achieved.

The use of indigenous forces and the unique nature of UW mean that conventional methods of support are not usually available. In the twentieth century, the technological advance of the airplane and the parachute allowed UW to become a

strategic military capability (Metzgar 2000, 16). The airplane and the parachute enabled insurgencies and resistance movements to be effectively supported by resupply, infiltration and exfiltration, which could otherwise not be sustained. The partisan groups of World War II aided by United States Army Air Force (USAAF) and Royal Air Force (RAF) aircraft were able to mount a considerable resistance to Nazi occupation, the importance of which was not realized until after the end of the war.

U.S. SOF historically have been downsized at the end of major conflicts, and SOF airpower capabilities have been no exception. Lessons learned in how to conduct UW, and the capability to support UW, have been lost in the reduction of manpower and shift of focus back to conventional operations. As new conflicts emerged, SOF aviators have had to relearn how to support UW. This meant relearning what was required to support UW with airpower, and how to support it with the aircraft available. Historically, airpower has had to adapt conventional aircraft in order to meet the requirements of UW.

Current conflicts have shown the utility of UW. During the invasion of Afghanistan a small number of SOF ground forces, with the significant help of airpower, were able to use the Northern Alliance forces to bring about the downfall of the Taliban in a very short time. During the invasion of Iraq, after Turkey refused to allow the basing of U.S. forces, the Kurdish UW effort became the primary means of holding 12 of Iraq's 20 divisions in the North, preventing their movement to oppose the invasion from the south (Grdovic 2008, 34). This support was almost solely provided by airpower. UW is a useful tool in carrying out U.S. strategic objectives and airpower has played a significant role in recent successes.

The primary means of air support for UW comes from the air assets that fall under Special Operations Command (SOCOM). The Army supports special operations with rotary wing aircraft from the 160th Special Operations Aviation Regiment (SOAR), while the Air Force Special Operations Command (AFSOC) provides mobility and fires with fixed wing and tilt rotor aircraft, where the term tilt rotor describes the CV-22. Both the 160th SOAR and AFSOC are part of SOCOM, which provides special operations with their own organic air assets. For situations requiring air support beyond the capability of their organic assets, SOF would have to request assistance from the U.S. Air Force (USAF) or the U.S. Army, which necessitates additional coordination and is not guaranteed. Because of the distinctive differences in the nature of the aircraft possessed by AFSOC and the SOAR, they have very different special operations support capabilities. While the SOAR is fully capable of supporting special operations in a number of ways, this thesis will only examine the potential contribution to UW provided by the USAF.

Primary Research Question

This thesis examines the current ability of SOF to conduct UW with air support. In order to determine the present capability, it will be important to look at the question--Does AFSOC currently have airpower assets with the capability to support UW operations with mobility, resupply, and fires?

Secondary Research Question

In order to answer the primary research question, several additional questions will be explored. These secondary research questions are: What capabilities and

characteristics does airpower use to support UW? How has airpower supported UW in the past? What does doctrine say about airpower supporting UW? What AFSOC airpower capabilities can currently be provided?

Definitions

Both the Special Operations community and the U.S. military community as a whole have long struggled with defining the intricate differences between the different types of conflicts that fall short of the traditional definition of conventional warfare. To add to the confusion, terms used to describe these military operations other than conventional war have undergone multiple definition changes in doctrine. All-encompassing terms used in World War II such as “partisan warfare” and “guerrilla warfare” have gradually been refined and transformed into today’s “resistance movement” and “unconventional warfare.” The current joint definitions will be used except where the current definitions are incomplete

Counterinsurgency: Those military, paramilitary, political, economic, psychological, and civic actions taken by a government to defeat insurgency (JP 1-02 2008, 130).

Exfiltration: The removal of personnel or units from areas under enemy control by stealth, deception, surprise, or clandestine means (JP 1-02 2008, 195). This paper will use this term to imply the removal of personnel by air.

Infiltration: The joint definition is: the movement through or into an area or territory occupied by either friendly or enemy troops or organizations. The movement is made, either by small groups or by individuals, at extended or irregular intervals. When used in connection with the enemy, it implies that contact is avoided (JP 1-02 2008, 261).

For the purposes of this thesis, this paper will use this term to imply the insertion of personnel conducting UW by aircraft.

Insurgency: The joint definition is: an organized movement aimed at the overthrow of a constituted government through use of subversion and armed conflict (JP 1-02 2008, 268). This definition is not adequate and for the purposes of this thesis, the definition of insurgency will be expanded. The joint definition is incomplete because it does not capture the irregular and covert, or possibly clandestine, nature of the organized movement. An insurgency exists when the organized movement is not recognized as belligerents or combatants. An insurgency can be aimed at the overthrow of a sitting government or an occupying power.

Irregular Warfare: A violent struggle among state and non-state actors for legitimacy and influence over the relevant population(s). Irregular warfare favors indirect and asymmetric approaches, though it may employ the full range of military and other capacities, in order to erode an adversary's power, influence, and will (JP 1-02 2008, 282). Irregular warfare is a broad term that incorporates a number of operations and activities including COIN, insurgency, UW, terrorism, and others.

Resistance Movement: A type of insurgency where a movement is organized to resist an occupying power. This definition is more restrictive than the Joint definition that does not limit it to the resistance of an occupying power. Without this restriction however, the term becomes synonymous with insurgency (JP 1-02 2008, 470).

Unconventional Warfare (UW): A broad spectrum of military and paramilitary operations, normally of long duration, predominantly conducted through, with, or by indigenous or surrogate forces who are organized, trained, equipped, supported, and

directed in varying degrees by an external source. It includes, but is not limited to, guerrilla warfare, subversion, sabotage, intelligence activities, and unconventional assisted recovery (JP 1-02 2008, 574). However, UW is more than simply the use of indigenous forces to achieve a military objective, and is usually used to describe the support to an insurgency working to overthrow a government.

Limitations

There are three major limitations to the scope of this paper. First, the sensitive nature of special operations demands a high level of secrecy. Although many details of past special operations have been declassified, many details of recent operations including Operation Enduring Freedom and Operation Iraqi Freedom remain classified. This study will only reflect what information is available through unclassified sources. Second, this study will also be limited to research conducted before 1 September 2009. AFSOC is currently expanding capability by establishing new squadron of nonstandard aviation, which will be made up of small civilian aircraft. Because they are new and their final capabilities and unit size is uncertain, nonstandard aviation assets will not be considered in this study.

Delimitations

This study will not try to describe specific tactics, techniques and procedures, nor will it try to determine all possible uses of airpower in support of UW, but will concentrate on the distinct capabilities of air mobility, resupply and fire support that airpower offers UW operations. It is also beyond to scope of this thesis to examine all

past examples of airpower's support to UW, but historical instances will be used to establish what support airpower can provide.

Significance

The U.S. military currently finds itself in a conflict that emphasizes COIN; however, the skills and capabilities needed to defeat an insurgency are much different than what is required to support an insurgency and successfully conduct UW. As SOF concentrate on their current role, they risk losing the capability of performing other special operations missions, including UW.

UW is one of the SOF core tasks. If there are any limitations or shortfalls in our nation's ability to conduct these operations, they need to be identified and addressed as soon as possible. It is the nature of both SOF and airpower that neither can be developed quickly and the earlier a limitation or shortfall can be identified, the greater the chance that capability can be developed before it is needed.

Summary

This chapter provided a background on UW and on the problems associated with using airpower to support UW operations, introduced the primary and secondary research questions and presented limitations of this study. The next chapter will examine the relevant literature to summarize previous research and provide a foundation for later analysis. Chapter 3 will establish the methodology used in answering the primary research question. Chapter 4 will use the research methodology and apply it to the literature in chapter 2 in order to answer the primary and secondary research questions. Finally, chapter 5 will present the conclusions and recommendations.

CHAPTER 2

LITERATURE REVIEW

The primary research question this study seeks to answer is whether AFSOC currently has airpower assets with the capability to support UW operations with mobility, resupply, and fires? The previous chapter provided background on both UW and the problems associated with using airpower in UW. This chapter will present and discuss the relevant literature to this study in order to provide a foundation for the analysis in chapter 4. It will examine prior research to provide a summary of what has already been accomplished and identify areas where more research is needed.

There is a substantial amount to literature pertaining to the history of UW and airpower's support to UW; however, the current doctrine is limited. For the purposes of this literature review, it will be necessary to examine the main areas of interests outlined by the secondary research questions in chapter 1: How airpower has supported UW in the past, the doctrine regarding airpower and UW, and AFSOC's current airpower capabilities with regard to UW. Following a brief overview of each area of interest, information gaps and trends in the literature will be identified. Finally, the significance of this these in relation to current literature will be discussed.

History

The history of irregular warfare is as long as the history of warfare itself, and the study of airpower in irregular warfare is really a study of irregular warfare itself, so some literature on the nature of IW itself was examined. There are numerous resources detailing the history of IW, including Robert Asprey's significant work *War in the*

Shadows: The Guerrilla in History, which provides an overview of irregular warfare from the time of Alexander the Great. Anthony Joes' *Guerrilla Warfare: A Historical, Biographical, and Bibliographical Sourcebook* is another strong source for the study of IW in general.

Since its development, the airplane has been used in the prosecution of small wars. Some of the earliest examples include the pursuit of Franciso "Pancho" Villa by the U.S. Army in 1916 (Corum 2003, 11), and the RAF development of the concept of air control after World War I (Corum 2003, 51). In the majority of irregular warfare cases, airpower has been used by the stronger and richer power against an insurgency simply based on the fact that the stronger side is the one that can afford the aircraft. Philip Towle notes in his book *Pilots and Rebels* "the great powers use aircraft in unconventional wars because they have them, their armed forces are trained around them and they can bring enormous firepower to bear on their enemies" (Towle 1989, 1). Numerous cases exist where, for a number of reasons, airpower has been used to support the insurgency instead of to crush it. In World War II, airpower was effectively used in Operation Thursday to support the Chindit operations in Japanese occupied Burma (Kelly 1996, 24-35). Airpower was also used extensively to support resistance movements in Nazi occupied territory, most notably by the RAF and USAAF in France and Yugoslavia.

The support of the partisan forces in World War II has been overshadowed by the strategic bombing campaign, but its contribution to the war effort was significant. Major Bernard Moore compiles a detailed history of this support in his School of Advanced Airpower Studies thesis "The secret air war over France: USAAF special operations units in the French Campaign of 1944" where he makes the observation with regard to USAAF

operations in Europe that “this episode marks the origin of special operations as a role in American airpower (Moore 1992, 2). In his book *From a Dark Sky: The Story of U.S. Air Force Special Operations*, Orr Kelly provides a history of the origins of American airpower used in special operations, including a detailed account of operations in World War II.

Additionally the RAND Corporation published seven memorandums from a 1963 symposium on the role of airpower in COIN and UW, which collect the personal recollections of men who participated in various campaigns. Memorandum RM-3656-PR covers UW in the Mediterranean theater and details support to the French resistance and the Yugoslav guerrillas. The USAF Historical Study *Special operations: Army Air Forces aid to European resistance movements,* written by Major Harris Warren in 1947, documents the USAAF’s role in the unconventional support of the resistance movements shortly after the conclusion of the war. Colin Beavan’s *Operation Jedburgh: D-Day and America's First Shadow War* gives an account of the Allied support to the partisan movements as a whole, not simply from an air perspective.

Following World War II and the massive drawdown of the U.S. Military, little was left of the newly created USAF’s ability to support IW. When the Korean War erupted, airmen had to once again figure out how to support UW activities in a major conflict. There are several books providing a detailed history of the use of airpower to support UW in the Korean War, including Kelly’s previously mentioned book *From a Dark Sky*. Colonel Michael Haas’s book *Apollo’s Warriors: United States Air Force Special Operations during the Cold War* is a detailed account of airpower special operations from the Korean conflict through the end of the Vietnam War. Perhaps the

most notable source is Warren Trest's book *Air Commando One: Heinie Aderholt and America's Secret Air Wars*. This biography of Brigadier General Heinie Aderholt is a detailed look at one of the most influential airmen in the development of the use of airpower in irregular warfare, beginning with his involvement in the Korean War. Airpower was used to infiltrate, resupply, and communicate with Korean commandos deep behind enemy lines.

At this same time, the USAF began to stand up several Air Resupply and Communication Service wings. These new wings were designed to provide a capability similar to the USAAF units that supported partisan efforts in World War II to use against the Soviet Union as the cold war began to take shape (Haas 1997, 98). These wings were not to last and after the Korean War they were reduced in size and scope, and were completely deactivated in 1956 (Haas 1997, 125).

Because of the nature of the Cold War, there were several other times when the U.S. used airpower to support insurgencies in order to further national interests without challenging the Soviet Union or China directly. In 1958, the U.S. covertly aided a coup attempt in Indonesia aimed at overthrowing President Achmed Sukarno. The Central Intelligence Agency (CIA) aided the rebels and provided a small force of aircraft to help with the unsuccessful coup attempt (Trest 2000, 81). As resistance grew in Tibet against the Chinese occupation, the U.S. began to resupply Tibetan rebels from bases in Thailand. The airmen performing these missions eventually even transported a small number of Tibetans to Colorado for training and, upon their return, airdropped them back into Tibet (Haas 1997, 143). While the U.S. supported a number of insurgencies during

the Cold War, the most significant use of airpower in unconventional conflict occurred in Vietnam and Laos.

A number of works have been written on the conflict in Laos. One of the best at providing an overview of the conflict as a whole, from the beginnings of U.S. involvement to the eventual fall of the Royal Lao Government to the communists is Timothy Castle's *At war in the shadow of Vietnam: U.S. military aid to the Royal Lao Government, 1955-1975*. Other Significant works that discuss U.S. involvement in Laos include Kenneth Conboy's *Shadow war: The CIA's secret war in Laos*, and Roger Warner's *Shooting at the moon: The story of America's clandestine war in Laos*, both of which delve deeper into the role of the CIA in the conflict.

There is significant amount of material written on airpower in the Vietnam conflict, with less being available on the conflict in Laos. However, Kelly's, Haas' and Trest's books all provide detail on the specific employment of airpower in both conflicts. Another School of Advanced Air and Space Studies thesis, written by Kieran Denehan, "Victory by Proxy? American Air Power, the Secret War in Laos, and the Future of the Global War on Terrorism" specifically concerns itself with Laos and provides a detailed history of different operations and how airpower was employed.

Recent conflicts have provided examples of the use of airpower supporting UW. In Operation Enduring Freedom, airpower was employed to support a very limited number of SOF personnel on the ground to enable the Northern Alliance to take down the Taliban government in Afghanistan. In its 2007 History, SOCOM provides a detailed, albeit unclassified, history of the UW effort in Afghanistan. Few other sources of unclassified information exist which detail the air aspect of the invasion of Afghanistan.

During Operation Iraqi Freedom, the Turkish refusal to allow coalition forces to invade Iraq from the North meant that SOF forces would be used in an UW role. SOF used Kurdish freedom fighters to hold Iraqi divisions in place, preventing their movement to oppose the invasion from the south. Because of the constraints imposed by Turkey, almost all support to these SOF came via air, and included 51 Operational Detachment Alpha (ODA) teams in the beginning several days of the conflict (SOCOM 2007, 115). As with Operation Enduring Freedom, there are few sources other than SOCOM's history to shed light onto airpowers support of this operation.

Doctrine

Doctrine concerning UW can trace its origins to World War II and the establishment of the Office of Strategic Services (OSS) (Metzger 2000, 1). However, after the war, the units assigned UW tasks, both ground and air, were allowed to all but disappear and UW doctrine development halted until the beginning of the next conflict. This pattern repeated itself throughout the 20th century. As a conflict concluded, the units, personnel, and equipment that conducted special operations, which also includes UW, were allowed to atrophy until needed again. This continued until the establishment of SOCOM in 1987, as a result of the Goldwater-Nichols Act that came about because of the Iran Hostage rescue failure. With the creation of a permanent joint SOCOM, doctrine for UW has received more constant attention but still lacks a comprehensive joint doctrine. A detailed history of UW thought and doctrine is outlined in Greg Metzgar's School of Advanced Airpower Studies thesis "Unconventional Warfare: A Mission Metamorphosis for the 21st Century?" Although written at the School of Advanced Airpower Studies, Major Metzgar is an U.S. Army Special Forces Officer and his thesis

concentrates on UW doctrine from a Special Forces perspective without ignoring USAF doctrine. Additionally, Major David Matarazzo's School of Advanced Military Studies monograph "Far More Intellectual than a Bayonet Charge: The Need for Joint Unconventional Warfare Doctrine" details the lack of a joint doctrine for UW.

Airpower doctrine concerning UW has suffered from the same cycle as UW doctrine as a whole, but has been further limited by the conventional Air Force's focus on major combat operations. "The USAF traditionally focused its theoretical and doctrinal efforts on the central airpower functions of air superiority, strategic bombing, and interdiction" (Chavez 2007, 2). Because of this, UW airpower doctrine has been quite limited. Major Robert Chavez provides a history of IW airpower doctrine in his School of Advanced Military Studies monograph "Basic and Operational Doctrine for Airpower in Irregular Warfare." His thesis is concerned with IW as a whole, but tends to concentrate on COIN in particular because of the nature of current conflicts.

Current doctrine on airpower and UW is spread over several different publications. Joint Publication (JP) 3-05, *Doctrine for Joint Special Operations*, discusses the special operations core tasks which includes UW. It provides a good discussion on the nature of UW, but does not make any reference to the use of airpower (JP 3-05 2003, II-8). To find more details service doctrine will need to be explored.

An examination of USAF publications provides a little more insight. Air Force Doctrine Document (AFDD) 2-7, *Special Operations* provides the guidance on how Air Force Special Operations Forces (AFSOF) will support the special operations core tasks. It describes the core mission areas that AFSOF provides to SOCOM to accomplish these core tasks. Relating to UW, it outlines Intelligence, Surveillance and Reconnaissance

(ISR), precision fires, Psychological Operations (PSYOP) dissemination, information operations and specialized air mobility, but it does not specifically connect these core mission areas with specific core tasks, but rather discusses how they will support all special operations core tasks in general (AFDD 2-7 2005, 11-14). The newest USAF publication that references UW is AFDD 2-3, *Irregular Warfare* published in August 2007. This publication provides guidance for the USAF as a whole, not just AFSOF, on irregular warfare. Because of the nature of current conflicts it emphasizes the COIN aspect of IW, but it also provides the most comprehensive USAF guidance on what it refers to as "Support to Insurgency" (AFDD 2-3 2007, 18, 63, 73). In these sections, it details how airpower can support UW, specifically stating:

> The UW role includes such actions as insertion, extraction, and resupply of ground contact teams, direct-action forces, surface-force advisors/trainers, and guerrilla/partisan forces. Air Force capabilities may also be employed to support escape and evasion networks and intelligence networks; provide aerial delivery and resupply to U.S. and indigenous/surrogate forces; carry out reconnaissance and surveillance; provide C2 platforms; and furnish aerial cover and fire support for specific contingencies. Information and influence operations may also be employed as force multipliers for military actions, or for tactical cover and deception activities. (AFDD 2-3 2007, 18-19)

This provides guidance on specifically what roles airpower will perform in support of UW. AFDD 2-3 also discusses the complicated nature of supporting UW and emphasizes the political aspects of the conflict may contribute significantly to how airpower is utilized.

Additionally the new Army COIN manual, Field Manual (FM) 3-24, *Counterinsurgency*, devotes an appendix to airpower's role in COIN. It recognizes that COIN is a joint operation and that "airpower and landpower are interdependent elements of such operations" (FM 3-24 2006, E-1). It states the main roles fulfilled by airpower

will be strike, ISR, IW and airlift, emphasizing the air forces will "most often transport troops, equipment and supplies and perform ISR missions" (FM 3-24, E-1). Although FM 3-24 concerns itself with COIN, the roles that it discusses for airpower to perform in COIN are similar to the UW roles outlined in AFDD 2-7.

Current IW doctrine as a whole has undergone a renewed interest because of the COIN conflicts in Iraq and Afghanistan. A new Irregular Warfare Joint Operating Concept was published in 2007 that outlines "how future Joint Force Commanders could conduct protracted IW to accomplish national strategic objectives in the 2014-2026 timeframe" (U.S. Department of Defense 2007, 5). Much of the doctrine pertaining to airpower and irregular warfare has been recently updated, including AFDD 2-3 and AFDD 2-7, and, although they now provide some guidance, there is still limited doctrine published on airpower support to UW.

With the renewed emphasis on IW there has also been some recent discussions on airpowers role in IW. Of significance is James Corum and Ray Johnson's book *Airpower in small wars: Fighting insurgents and terrorists* which examines the use of airpower in a COIN role and in their conclusion provide 11 lessons on the use of airpower in IW. Several articles have been written emphasizing the difference between the use of airpower in IW as opposed to conventional war, including major William Downs' "Unconventional Airpower" and Major Benjamin Maitre's "The Paradox of Irregular Airpower" both of which were published in the *Air and Space Power Journal*. And finally, the RAND Corporation's *Air Power in the New Counterinsurgency Era* is a study of the importance of Combat Aviation Advisor's (CAA) role in COIN.

Current Capabilities

AFSOC accomplishes its core mission areas as outlined in AFDD 2-7 with the employment of multiple types of aircraft and specially trained personnel. The majority of AFSOC aircraft that perform roles in support of UW activities, as described in AFDD 2-7, are variants of the C-130. Precision fires are provided by the AC-130U/H, usually with the aid of an Air Force Special Tactics Combat Controller specially qualified as a Joint Terminal Attack Controller (JTAC). Specialized air mobility roles are usually performed by one of the several different variants of the MC-130.

Specialized air mobility includes the airlift of personnel, equipment and supplies that can be either delivered by various types of airdrop, or by airland (AFDD 2-7 2005, 13). AFSOC currently has four different variants of the MC-130 that conduct specialized air mobility. The Mission of the MC-130 is to provide infiltration, exfiltration, and resupply of SOF in hostile or denied territory (Young 2009, 134). The variants of MC-130 differ in defensive capabilities, their ability to operate in weather, and their ability to refuel helicopters or tilt-rotor aircraft.

AFSOC currently uses the AC-130U/H as its primary platform to provide fires to SOF. The AC-130 is a specially modified C-130 that uses side-firing guns to provide precise firepower or area saturation for long periods (Young 2009, 123). Both variants have a 105mm Howitzer and a 40mm Bofors canon, while the AC-130U also is armed with a 25mm Gatling gun (Young 2009, 123). The AC-130's sophisticated sensors and fire control system allows the crew to work closely with ground personnel, usually through a JTAC, in order to provide precision fires and an over watch capability. Additionally, AFSOC has recently acquired MQ-1 Predators, which provide an additional

limited strike capability. The Predator is a medium altitude unmanned aerial vehicle, which provides a ISR platform combined with an ability to carry two Hellfire missiles and an extended loiter time (Young 2009, 127).

AFSOC also has a capability to perform combat aviation advisory operations, one of the core mission areas in AFDD 2-7. The 6th Special Operations Squadron currently provides a standing unit to provide CAAs worldwide, in regionally specific teams that can provide advice and assistance with a wide variety of aviation operations including, but not limited to, tactical airlift, air attack, maintenance, supply, and munitions (Vick et al. 2006, 118-119). Unfortunately they have limited resources and, although they are expanding, they cannot meet the current requests for their assistance (Montgomery 2007, 7-10).

Although not a current capability, a recent AFSOC white paper by Colonel Billy Montgomery titled "USAF Irregular Warfare Concept" calls for the development of an irregular warfare wing in order to successfully support IW. The purpose of an IW wing would be to build partner nation capacity and develop an organization with the flexibility and capability to conduct COIN operations. The IW wing would have a mix of different aircraft including medium lift, light lift, light fixed wing strike, rotary wing, and ISR assets. These aircraft combined with an increased CAA capability would be used to build partner nation airpower capability and capacity. As part of the IW wing, the white paper calls for AFSOC to develop a fixed wing light attack aircraft. A light attack aircraft could fill several roles, but most importantly it would provide a strike asset that is cheaper and easier to acquire than an AC-130. While a side firing gunship provides some advantages, including flexibility and available time on station, a light fixed wing aircraft could

operate in a more restrictive threat environment and deliver heavier munitions (Montgomery 2007, 14). Additionally, because of its low cost and ease of use it could be used by partner nations to quickly improve their aviation capability inexpensively. An IW wing structured as described in the white paper would give AFSOC a formidable organization with the ability to conduct IW.

Trends

The current trend in the literature is to deal with today's war, thus the majority of new doctrine and thought deals with the use of airpower in irregular warfare and specifically in COIN. This is not necessarily detrimental to UW thought because as part of IW it still receives some attention, especially from sources that recognize that the heart of IW is insurgency and COIN.

Significance of Thesis in Relation to Existing Literature

The history of airpower in UW, and even irregular warfare as a whole, is a story of adapting the currently available aircraft and technology to support IW as best as possible with little or no planning. This study will try to identify what aircraft and capabilities are required to support UW before a conflict exists.

Summary

This chapter examined the relevant literature to the primary research question. The research was divided into topics base on the secondary research questions and presented an examination of the history of UW and the use of airpower in UW operations, then discussed the relevant doctrine to the use of airpower related to UW, and finally discussed AFSOC's current capabilities to support UW. It summarized previous

research on the subject and identified gaps in extant knowledge. The next chapter will outline the methodology used in answering the primary research question.

CHAPTER 3

RESEARCH METHODOLOGY

This chapter outlines the methodology used in pursuing the primary research question of whether AFSOC's assets can currently support UW operations with mobility, resupply and fires. This chapter indentifies the analysis required to develop the conclusions and recommendations of the study. Chapter 2 presented the literature pertinent to this study organized according to the secondary research questions. This chapter will describe the research methodology and explain why it was developed to answer the primary research question.

Although there is substantial historical documentation of airpowers support to UW, there is little that discusses the relationship between airpower's current capabilities and UW. This modified case study will answer the primary research question asked in chapter 1 by comparing the historical cases of the partisan resistance to Nazi Germany in World War II and the U.S. support to the Hmong during the Laos conflict against current AFSOC capabilities.

This chapter will define the research methodology after first describing how the information was obtained and the criteria used to establish the value of the information presented. Finally, the strengths and weaknesses of the research methodology will be outlined.

Steps Taken to Obtain Information

Because the study is limited to unclassified information, research is limited to open source information. These sources include theses from the United States Command

and General Staff College, School of Advanced Military Studies, and the Air University, School of Advanced Air and Space Studies. The U.S. Army Combined Arms Research Library at Fort Leavenworth, Kansas, allows access to multiple academic databases that are useful to search for relevant literature. Standard Internet searches using search engines such as Google will be used to find academic articles, including RAND Corporation publications. The Combined Arms Research Library research librarians provide access to other pertinent literature.

Research Criteria

Irregular warfare conflicts are complex and varied, and history provides a great number of cases with significant lessons on the nature of UW. The complex nature of IW, and its subset UW, means that each conflict is unique, irrevocably tied to the circumstances of each individual conflict, much more so than in conventional conflicts. This uniqueness results in a large number of vastly different conflicts to potentially examine.

Airpower, however, is a relative newcomer to warfare, and although it was used from its very beginning in irregular conflicts, the number of cases where it has been used to support UW is relatively small from a historical perspective. Potential case studies of airpower supporting UW include Chindit operations in Burma during World War II, Allied resistance to the Japanese on Luzon, Tibetan resistance to Chinese occupation, U.S. support to rebels in Indonesian in 1957-1958, and the Vietnam War. The European resistance movements in World War II and the secret war in Laos will be the case studies examined because they both provide multiple well-documented examples of airpower support to UW.

Research Methodology

To answer the primary research question posed in chapter 1, the two historical case studies will be compared to a hypothetical contemporary situation using AFSOC's current capabilities and doctrine. First, a literature review will be performed to gather relevant information for the study. All three cases will be examined using the evaluation criteria of "Effectiveness," "Efficiency," and "Unity of Effort."

The first evaluation criteria will be effectiveness. As defined by the Merriam-Webster Dictionary the word effective means to produce a decided, decisive, or desired effect. The effect desired is the accomplishment of the UW military objectives. Each case study will be examined to determine if the use of airpower furthers the overall military objectives.

Efficiency will be the second evaluation criteria. Efficiency, again according to the Merriam-Webster Dictionary differs from effectiveness in that it is concerned with the comparison of production with cost. Efficiency, therefore, is a measure of how much effort in manpower, lives, equipment, and money is used to achieve the desired effect. Efficiency is used as an evaluation criterion to determine if the cost is worth the achievement of the military objectives.

The final evaluation criteria will be unity of effort. According to JP 1, unity of effort "is the coordination and cooperation toward common objectives, even if the participants are not necessarily part of the same command or organization – the product of successful unified action" (JP 1 2007, GL-11). The case studies will be examined to determine if the use of airpower to support UW aids or hinders Unity of Effort.

Each case study will be evaluated against the criteria to determine if the use of airpower was optimal, desirable, or less than desirable (see table 1).

Table 1. Evaluation Criteria

	Effectiveness	Efficiency	Unity of Effort
Less than desirable	Airpower detracts from the accomplishment of military objectives.	The cost of airpower's contribution to the accomplishment of the military objectives is significant, and provides no advantage over other means.	The use of airpower degrades the Unity of Effort
Desirable	Airpower aids in the accomplishment of military objectives.	The cost of airpower's contribution to the accomplishment of the military objectives is acceptable, and provides an advantage over other means.	The use of airpower has minimal effect on the Unity of Effort. The Unity of Effort is not significantly different than if airpower was not used.
Optimal	Airpower significantly contributes to the accomplishment of military objectives. Airpower enables the attainment of some objectives that would not otherwise be accomplished.	The cost of airpower's contribution to the accomplishment of the military objectives is minimal, and provides a significant advantage over other means.	The use of airpower greatly enhances the Unity of Effort.

Source: Created by author.

Then the historical cases will be examined to determine which airpower capabilities were used to aid UW and evaluated using the above criteria. Next, current airpower doctrine will be analyzed to determine how AFSOC's current capabilities would be utilized in a hypothetical situation and the hypothetical use of airpower will then be

examined using the evaluation criteria. Once all three cases have been evaluated using the above criteria they will be compared to determine if AFSOC's current capabilities would be effective in supporting UW (see table 2).

Table 2. Example Evaluation Comparison

	Effectiveness	Efficiency	Unity of Effort
WWII			
Laos			
Hypothetical scenario			

Source: Created by author.

Strengths and Weaknesses of Methodology

This study's strength is that it combines a current view of UW and airpower with historical cases of actual airpower employment in specific UW situations. By selecting World War II partisan operations and Laos this study will examine three distinct eras in airpower application. This will help provide a complete picture of airpower's support to UW.

This study has several potential weaknesses. One of the substantial weaknesses is the risk to the validity of the methodology for the study. This is a subjective study that attempts to analyze past experience and apply that experience to a modern problem. In order to attempt to be as objective as possible, the most logical evaluation criteria were chosen. The evaluation criteria represent the most important aspects of airpowers application in UW. Effectiveness answers the question "did it work?" which is pivotal to

ensuring the analysis is relevant to the primary research question. Efficiency answers the question “how much does it cost?” which is significant because even if airpower application in UW is effective, but at too high of a cost, then it will not be employed. This relates directly back to the primary research question as well. Unity of effort answers the question “will the use of air power contribute or detract from unified action taken to accomplish the military objectives?” While not as clear-cut as the other two criteria, it is significant because it establishes how and when airpower will be employed, which will also relate directly back to the primary research question. The decision to use these evaluation criteria is still subjective, however, and the use of other evaluation criteria would potentially alter the conclusions of the study.

Details of recent operations remain classified, and in order to keep this thesis unclassified, Iraq and Afghanistan will not be used as case studies. By using historical cases where most information has been declassified allows for a more complete picture to be assembled. However, the use of less recent case studies also means that less consideration will be given to how current technology will effect airpower in this role. Even though the technology used during the cases will vary, the principles of successfully conducting UW remain the same and lessons learned from the case studies will be applicable to the current environment. Additionally, this study has been limited to two historical case studies. The examination of additional cases could further shed light on the question, but the length of the paper limits the number of cases that can be examined. The cases are also concerned largely with the U.S. perspective, and while other nations’ experiences would potentially aid in answering the primary research question, there is too little information available to provide a useful perspective.

Summary

This chapter established the research methodology that will be used in this study. The two case studies will be conducted to determine airpower capabilities used, and then analyzed to determine airpower's effectiveness, efficiency, and contribution to unity of effort. Then a hypothetical case will be examined applying current doctrine to AFSOC's current capabilities and compared to the same evaluation criteria.

Chapter 4 will use the research methodology developed in this chapter and apply it to the literature from chapter 2 in order to answer the primary research question.

CHAPTER 4

ANALYSIS

This chapter analyzes the primary research question of whether AFSOC's airpower assets can currently support UW operations with mobility, resupply and fires. The research methodology outlined in chapter 3 will be applied to the literature discussed in chapter 2 in order to answer both the primary and secondary research questions.

This chapter will begin by examining the U.S. air power support to the French partisan resistance groups during World War II. Next, it will look at the U.S. support to the Hmong during the Laos conflict, and finally it will examine a realistic hypothetical situation using AFSOC's current capabilities. Each case study will be examined using the evaluation criteria outlined in chapter 3 of "Effectiveness," "Efficiency," and "Unity of Effort." The case studies then will be compared to determine how AFSOC's current capabilities compare to previous experiences.

U.S. Support to the French Resistance

The planned invasion of the European Continent by the allied forces, codenamed Operation Overlord, was a direct attack against German occupied France and had several inherent risks. General Eisenhower himself was extremely concerned about the vulnerability of his forces during the first phase of the operation, before all the Allied forces were on shore (Moore 1992, 5). In order to mitigate this risk, the allies used several supporting efforts including airpower, deception, and UW. Airpower was used to weaken the German forces in the area, as well as establishing air superiority, which was a requirement for the invasion to begin. It was also used to slow the German response to

the invasion once the landings had occurred. Deception was used to obscure the location and timing of the invasion, hopefully causing Germany to concentrate defenses in the wrong area, or at least spread out the defensive forces. UW would be used to disrupt the German reinforcement of their troops on the coast and slow or divert any counterattacks. The French resistance would be the primary force used to accomplish this UW (Moore 1992, 5).

The British had a well-established intelligence system, and in July 1940, Prime Minister Winston Churchill established the Special Operations Executive (SOE), specifically to carry out Britain's plans of "sabotage, subversion, and secret armies" to, in the words of Churchill himself, "set Europe ablaze" (Beavan 2006, 11). Beginning in 1940, the British began infiltrating intelligence agents into France, and by March 1941 the SOE was inserting agents for the purpose of helping to organize the French resistance (Foot 1966, 150-153; Warren 1947, 114). At this time the United States had no centralized intelligence service and, in fact, the Army, the Army Air Forces, the Navy, the Federal Bureau of Investigation, the Board of Economic Warfare and the Departments of State, Commerce, and Agriculture all had their own intelligence units (Alsop and Braden 1946, 14). In order to centralize intelligence efforts President Roosevelt formed the Office of the Coordinator of Information (COI) in July 1941 and tasked William J. "Wild Bill" Donovan to lead and organize the new office (Beavan 2006, 24-25). After the U.S. entered the war, the COI was reorganized and placed under the control of the military establishment. The COI was renamed the Office of Strategic Services (OSS) and became an agency of the JCS with Donovan given the rank of Brigadier General (Beavan 2006, 25).

The COI was in London as early as 1941, and as plans for Operation Overlord developed, the OSS planned to provide support by launching intelligence and UW operations in France. Setting up such an organization from scratch was not a simple task and the OSS relied heavily on the British, who had a well established intelligence system and cooperated if only because of the importance of the Lend Lease program and the fact that they saw the popular Donovan as someone who had direct access to the White House (Alsop and Braden 1946, 17). By 1943, the British had several "special duties" units in the RAF which routinely infiltrated agents into almost anywhere in German-occupied territory. The agents could be infiltrated, supplied, and exfiltrated from most of Europe (Moore 1992, 11). The fact that aircraft had become an essential part of the British SOE operations was not lost on the OSS officers and planners. Agents were infiltrated by other means as well, including by boat, submarine and on foot, but aircraft provided a speed, range and flexibility that could not be matched.

It quickly became obvious to the OSS staff that the RAF would not be able to support both the British and American plans for the large-scale UW operations planned in France. Realizing they would need their own air support the OSS began attempting to secure its own aircraft, or secure dedicated support from the USAAF. The OSS plans were approved by the JCS, with the provision that resources would come from the theater commanders (Moore 1992, 14). The strategic bombing campaign against Germany and its need for a large number of bomber aircraft was a major obstacle in getting dedicated aircraft for the OSS.

The RAF had been using a number of different aircraft to provide support to the SOE behind enemy lines. The RAF had determined that the only aircraft that had the

range, payload capability and self-defense capability were four-engine long-range bombers, and began using the four-engine Halifax strategic bomber for these missions (Moore 1992, 11). The OSS asked for dedicated bombers during the height of the strategic bombing campaign, when Major General Ira Eaker, commander of the Eighth Air Force, was trying to validate the idea of strategic bombing and throwing as many bombers as possible at Germany in an attempt to defeat Germany by bombing alone. Compared to the large number of losses suffered by the strategic bombers during this campaign, the OSS request was relatively small, a mere 18 aircraft for operations out of England (Moore 1992, 24). Major General Eaker was aware of the OSS plans and was sympathetic to their needs, but simply could not spare any of his strategic bombers from the campaign. In the Mediterranean Theater of Operations (MTO), the OSS had slightly more luck and was able to secure three strategic bombers to support operations behind enemy lines (Moore 1992, 18).

In the fall of 1943, the OSS's luck changed because of an agreement between the Army and the Navy that called for the Navy to conduct all airborne anti-submarine warfare. This freed four squadrons of USAAF B-24 Liberators from their role of anti-submarine warfare (Moore 1992, 25). Because the airplanes were highly modified and their crews were trained in low-level, over-water operations, these squadrons were not useful as high-altitude strategic bombers and Major General Eaker was able to devote them to supporting the OSS. The new units, formed under an Eighth Air Force project code named Carpetbagger, began training with their RAF counterparts to learn their new mission and flew their first operational mission in January 1944 (Warren 1947, 33).

When Eaker became the commander of the Mediterranean Allied Air Forces (MAAF) in January 1944, he found the ad hoc support being provided to the OSS in the MTO unacceptable. He requested to reorganize the three airplanes currently organized as a liaison squadron into a bomber squadron so that he could provide the needed number of bombers. General Arnold, the Commanding General of the USAAF, resisted this suggestion because he did not want to take any strategic bombers away from the bombing campaign. After 3 months of debate Eaker finally got permission to reorganize, and by March 1944 the MTO soon had 15 heavy bombers, the three original B-17s and 12 additional B-24s, to support UW in France (Moore 1992, 34).

Although the "Carpetbaggers" were flying missions out of England, it became apparent that more aircraft were needed to support OSS plans in France. General Eisenhower directed the USAAF to dedicate 25 more aircraft to the Carpetbagger project. In May 1944, two additional squadrons of 16 aircraft were assigned to Carpetbagger, bringing a total of 64 B-24s dedicated to the project.

Effectiveness

To examine the effectiveness of the air operations supporting the French resistance, the use of airpower will be evaluated to determine if it successfully achieved the desired effects. The units tasked to support OSS operations were tasked to accomplish significantly different missions than most of the Allied Air Forces (AAF) because the effects they were being asked to create were significantly different. The purpose in aiding the French resistance was to ensure they were capable of acting as a force that could open up another front against the German occupation, tying up troops and, after the invasion, disrupting reinforcements and slowing counterattacks against Eisenhower's troops.

The “Carpetbaggers” flew missions to infiltrate agents into France and other parts of Europe, by paradrop and, less frequently, by airland. They also frequently resupplied resistance groups by dropping needed weapons and equipment. The “Carpetbaggers” were also required to exfiltrated agents, resistance members, or others, usually downed aircrew members, but this required a secure airfield to land and was accomplished much less frequently.

The requirements of these missions called for much different tactics then were used by the aircraft prosecuting the daylight precision bombing campaign. To accurately accomplish the airdrop the aircraft had to be much closer to the ground, usually from 400-800 feet. The missions also had to minimize the possibility of giving away the resistance groups location. Additionally, the small number of personnel or the limited amount of supplies being dropped did not require more than one aircraft for each mission, and groups needing more than one aircraft could provide usually were resupplied with multiple aircraft flying separate missions.

All air operations require an element of secrecy. Conventional operations use secrecy to protect the aircraft as well as maintain surprise over their target. Hopefully, secrecy is maintained until the last moment before the bombs explode or the aircraft strikes the target, but once the strike occurs it is no longer a secret.

Because of the nature of the missions being flown over France by the “Carpetbaggers” and others, secrecy was more important than for conventional missions. The French resistance maintained a persistent presence and the Germans devoted a significant effort to trying to eliminate the resistance groups or try to limit their effects. This means that for these special operations flights the locations of the drops zones, or

pick-up or drop-off points, had to be kept secret to protect the French resistance forces and the British and American agents on the ground aiding them.

These requirements led to the development of specific tactics that included flying single ship missions at low altitude and at night to minimize the risk to a single unsupported aircraft. These tactics also helped prevent the Germans from being able to track the flights and figure out the location of the drop zones. They usually flew at 1,000 feet or below during nights with available moonlight. Flying low to the ground also allowed them to identify landmarks to aid in the navigation, because there were limited other navigational aids.

The aircraft were specially modified to help protect them from German night fighters and to accomplish the airdrop operations. The engines had exhaust flame dampers, the defensive guns had flash-hiders, and black out curtains were installed throughout the aircraft to aid in light discipline. They also had their ball turret removed, which left a large hole for the airdrops. This became known as the “Joe Hole” because the agents dropped were called “Joes” to protect their identity if the aircraft were to be shot down (Moore 1992, 45).

The resupply and infiltration operations were not without their problems. As operations increased, the problem of making sure the correct supplies were packaged properly and then delivered to the correct drop zone increased. This problem was compounded by communications issues caused by inexperienced French officers in key positions at headquarters (Beavan 2006, 197). This caused a situation where some groups would get all the supplies requested, while others got little or nothing. Additionally, the wrong items were delivered to the wrong groups on multiple occasions. Some agents

were injured during the airdrops and could no longer carry out their missions (Beavan 2006, 197-198).

Effectiveness was shown in organizing and managing a UW effort that would not have otherwise occurred. De Gaulle thought that with a little prompting there would be a general rebellion, this never occurred, and the success is shown in the unity of action that occurred in support of the invasion.

The specially modified bombers successfully completed over 2,000 missions airdropping agents and supplies into France to support the resistance groups. They infiltrated 830 persons and dropped 4,636 tons of supplies (Moore 1992, 49). The French resistance forces put these supplies and agents to good use, effectively disrupting and delaying German forces movements after the invasion on D-Day, and according to the official historian of the SOE the effect of the resistance "was of a size and importance comparable to the Air Forces" (Beavan 2006, 156). Additionally, Eisenhower himself praised the resistance efforts saying "While no final assessment of the operational value of resistance action has yet been completed, I consider that the disruption of enemy rail communications, the harassing of German road moves and the continual and increasing strain placed on the German war economy and internal security services throughout occupied Europe by the organized forces of resistance, played a very considerable part in our complete and final victory" (Roosevelt 1976, 222).

Airpower was able to achieve the desired effects in aiding the French resistance. The use of airpower allowed for a significant number of resistance fighters to receive weapons, supplies, and assistance in the form of specially trained agents dropped behind enemy lines that provided leadership, knowledge, intelligence, communications, and

coordination with the overall war effort. The large numbers of equipped resistance fighters combined with the deployed agents' ability to coordinate their actions resulted in an effective UW effort that played a significant role in the disruption and destruction of German forces during Operation Overlord. Other methods of aiding the resistance movements would not have been able to support the French to the same level. The use of airpower was optimal in its support to the French resistance movements and significantly contributed to the accomplishment of the military objectives.

Efficiency

To examine the efficiency of the air operations the cost of the use of the aircraft, the losses and considerations for alternate methods must be examined. Efficiency will take into account how much effort, measured in terms of manpower, personnel, and aircraft, was required to achieve the effective support of the French resistance. It will also compare the costs if alternative methods were employed to accomplish the same objectives.

The first consideration is the cost of aircraft and aircrew lost in combat in the execution of the assigned mission. The "Carpetbaggers" lost a total of 13 B-24s in operations in France, while the bombers from the Mediterranean did not lose any aircraft over France. One B-17 and two B-24s were lost in noncombat accidents; however, the total number of combat losses was 13 aircraft (Moore 1992, 54).

The highly modified "Carpetbagger" aircraft and specially trained crews could not be used as part of the AAF's combined bomber offensive. The special operations squadrons were eventually assigned a total of 83 aircraft, 79 bombers and 4 transport aircraft. Of the 79 total bombers assigned to special operations squadrons, 32 were the

anti-submarine warfare aircraft that could not be used as traditional bombers, leaving 47 bombers that were made unavailable for the strategic bombing campaign (Moore 1992, 55).

Although this number seems significant, it also must be considered that this large number of aircraft was not assigned to special operations duties until June 1944. Before May 1944 the only aircraft that could have been used in the bombing offensive were the three B-17s used in the MTO, as the Carpetbaggers flying in England were using the anti-submarine warfare B-24s (Moore 1992, 55). Shortly before Operation Overlord, in March 1944, was the first time significant numbers of long-range bombers were diverted away from the strategic bombing campaign to support OSS operations, causing minimal effect on the campaign. Additionally, losses were light compared to the staggering losses of the bombing effort. The combined losses of heavy bombers during the raids on Ploesti and Schweinfurt/Regensburg during August 1943 totaled 114 aircraft (Moore 1992, 24). Compared to a total lose rate of 13 aircraft of 83 total shows a significant difference. Additionally, the total aircraft request by the OSS at the time of the raids in August 1943 was only 18 aircraft.

UW is not a new idea, and the use of clandestine agents and covert armies behind enemy lines has been practiced throughout history. The methods of infiltration, exfiltration, and resupply of personnel for UW are limited only by the imagination, and many different means have been used. The OSS used numerous methods to insert agents, and even used a submarine for its very first agent inserted because the AAF could not support any missions in 1943 (Roosevelt 1976, 173). These methods were difficult to conduct, were more suited for the infiltration of small numbers of agents, and could not

move the quantities of supplies needed by the resistance groups. A considerable amount of sustainment was required for guerrilla forces to be effective. The aircraft and the parachute made the sustainment of resistance forces practical.

The use of airpower also carries some cost to the agents and supplies being airdropped behind enemy lines. All drops did not go perfectly, and agents or supplies were dropped in the wrong place, sometimes into German hands, or were injured or damaged during the airdrop. The missions were usually flown with a reception committee on the ground waiting for the airdrop, which tied resistance forces to a specific place at a specific time exposing them to capture or attack from the Germans. While there are limited statistics on the amount of losses suffered in such a manner, the fact that the resistance was able to get enough support to be successful indicates that the cost was not prohibitive.

The use of UW also may cause some unintended consequences that must also be considered in the costs of the operation. During the four years of occupation by Germany, some thirty thousand Frenchmen were shot and executed by the Germans, some fraction of which were executed because of their involvement with the resistance. Additionally, after the Germans left France, thirty thousand additional Frenchmen died during the "purification." Some of these French were killed for collaborating with the Germans, but many others were killed for various political agendas or for no reason at all (Beavan 2006, 278). The unintended consequences of dropping tons of arms and ammunition to anyone willing to kill Germans was that there was no control of the weapons after the enemy had been defeated.

The use of aircraft to support the French resistance had a minimal cost when compared to the overall war effort. The losses of the “Carpetbagger” units were small when compared to the bomber losses suffered during the combined bomber offensive, and the limited number of aircraft used did not significantly detract from the bombing effort. The airplane and parachute made the resupply of resistance groups practical. Other methods of infiltration were used, but they did not provide the speed, flexibility, and volume of supplies that the use of aircraft allowed. The efficiency of the use of aircraft in this manner was optimal.

Unity of Effort

An examination to determine whether airpower aided to the unity of effort must examine whether airpower added to the accomplishment of the mutually shared goals of the Allied forces in defeating Germany. This question will need to be addressed on several levels. First, did the use of airpower to support to the French resistance aid in the defeat of Germany? Second, did it aid in the invasion of Normandy? Finally, did airpower aid in the supply and coordination of the French resistance in order to make it an effective force against the German occupation?

The first question of whether airpower’s support to the UW campaign would contribute to the eventual defeat of Germany was a question of great debate in the Allied military forces. The USAAF was working on the idea that airpower alone could cause Germany to surrender and put its primary emphasis on conducting the strategic bombing campaign. The USAAF leadership was not opposed to the idea of using aircraft to support UW activities in Europe, but at the time of the OSS request for aircraft in 1943 the USAAF were short of the bomber aircraft deemed required to successfully conduct

their strategic bombing campaign. Before 1944, only three B-17 bombers that could be used as bombers were modified for use in an UW role, and that occurred in the MTO.

After Eaker was able to provide the anti-submarine warfare squadrons to be used in a special operations role he began to see the importance of their missions. Once he became the commander of the MAAF in January 1944, he made a concerted effort to get dedicated bombers to be used in an UW role in the MTO. He attempted to change the ad hoc 122 Liaison Squadron, which flew the three converted B-17s, into a bomb squadron so that additional aircraft could be assigned. This created a political struggle that went to the highest levels of military leadership of the war. General Arnold and General Spaatz, the commander of the United States Strategic Air Forces and had operational command of the 8th and 15th Air Forces, were both resistant to the idea of taking any bombers away from the bombing campaign to be used for special operations missions (Moore 1992, 31). However, over the next three months numerous requests were made of the USAAF to expand their support to the French resistance, for both military and political reasons. The British weighed in, requesting aid to support their UW plan, General Devers, the Deputy Supreme Allied Commander, Mediterranean, expressed concern over the possibility of the resistance movements realizing that they were only being supported by the British, and finally General Eisenhower weighed in expressing concern over the French resistance's ability to support Operation Overlord. Eventually General Marshall, the Army Chief of Staff, after hearing a report on the AAF support to the resistance decided in favor of Eaker, and 12 additional B-24s were modified for special operations use (Moore 1992, 34).

It became apparent that more aircraft were needed to support OSS plans in France. The OSS became concerned that the lack of support could have negative political implications for French-American relations (Harrison 1951, 203). The State Department even informed the JCS that the limited support being provided to the French resistance could have negative implications if the French believed that the lack of support was deliberate (Harrison 1951, 203). General Eisenhower became so concerned about the support to the French unconventional war effort that he directed the USAAF to dedicate 25 more aircraft to the Carpetbagger project. In May 1944, two additional squadrons of 16 aircraft were assigned to Carpetbagger, bringing a total of 64 B-24s dedicated to the project in the European Theater of Operations.

The OSS did not have its own aircraft and relied on the support of the AAF, but once the aircraft were dedicated to the OSS operations, they did little else other than support the OSS, and at times the SOE, missions into Europe.

The French resistance was composed of many different groups, with varying interests, number of personnel, equipment, and capabilities. The use of aircraft allowed for these disparate groups to be resupplied in order to make them effective at disrupting the Germans. Unifying their efforts was more complicated. Without some sort of coordinated activity the resistance groups had little hope of doing more than causing disturbances in their area of operations. Coordination between the groups was accomplished by the use of two-way radios and was essentially the role of a number of the agents dropped into France. There were several types of agents that were infiltrated into France. Of note were the agents of Operation Jedburgh, who were assigned the task of jumping into France around D-Day in order to coordinate the activities of the French

resistance and support the invasion. The men of Jedburgh worked in groups of three, an American or British officer, a Native officer, usually French, and an enlisted radioman. They were tasked with meeting up with a specific resistance group and providing the leadership and the careful coordination required to support the invasion effort (Beavan 2006, 31). The use of aircraft allowed for the unity of effort of the resistance forces with Operation Overlord by providing needed equipment, especially the radios that enabled communication, and the agents, which provided the needed leadership and knowledge of needed coordination.

Airpower's effect on the unity of effort is not as clear as its effectiveness or efficiency. While most of the leaders of the USAAF, with the exception of Eaker, did not see the use of bomber aircraft to support the UW effort as important as their use in the combined bomber offensive, most of the other military and political leaders pushed heavily for airpower support for the French resistance. While eventually enough airplanes were dedicated to supporting the UW operations to make it successful, it required a long political fight that reached some of the highest levels of military power. The use of aircraft was successful in creating an effective resistance force that directly aided in the invasion of Normandy and the liberation of France by disrupting and delaying German forces, thus contributing to the unity of effort. Overall airpowers effect on the unity of effort can be viewed as desirable.

Laos

The fall of Dien Bien Phu signaled the end of the French Indochina Empire and precipitated the Geneva settlement in 1954 that besides partitioning Vietnam also stated, "Laos should remain as an independent and neutral buffer between China and Siam. It is

therefore essential that the United States should not attempt to establish any military influence [there]" (Castle 1993, 11). This attempt at establishing Laos as a neutral buffer between China and Thailand essentially was an attempt to place a buffer between communism and the west and set the stage for a "secret war" that took place for the next two decades, usually overshadowed by the conflict in Vietnam.

Laos was seen as an essential battleground in the effort to stop the spread of communism in the Cold War. The United States began to build its relationship with Thailand, providing generous amounts of military aid and establishing numerous bases that it would use to launch its anticommunist efforts (Castle 1993, 13). Laos already had a great deal of internal instability, and the communist movement in Laos, the Pathet Lao, along with communist troops from Vietnam already held portions of Eastern Laos. The United States saw the 1954 settlement as inadequate and began a military aid program to help the Laotian government hold off the communists. Eventually, this military aid included the deployment of Special Forces units to improve the Lao forces. This was an almost complete failure because of the ineffectiveness and corruption of the Laotian government and military (Castle 1993, 129).

Eventually, the increasing U.S. military support caused the Soviets to increase their support to the communist forces, bringing about a potential conflict between the superpowers. In 1962, there was another Geneva Agreement that allowed for the superpowers to bring a political end to the conflict and ended overt military aid to either side in the Laos conflict (Castle 1993, 130). The Soviets ceased their aid to the communist forces in Laos, but were unable to persuade Hanoi to remove their forces from Laos as per the Geneva Agreements. The determination in the United States was if

North Vietnam publically claimed to abide by the Geneva Agreements but continued to hold positions in Eastern Laos to use as a transit route to its forces in South Vietnam, then the United States would be able to engage in limited military intervention with limited risk of international condemnation.

The Laos military suffered from extremely poor leadership and morale with a poor combat record against the communist forces and had little hope of improvement. U.S. officers providing aid realized that "the Laotians were not Turks . . . they would not stand up and fight" (Castle 1993, 39). The United States needed someone who was willing to fight the communists. They found an ally in the Hmong people of Northeast Laos. The Hmong were a fierce and independent people who lived separate from most of the lowland Laos population with whom they had a poor relationship. Shortly before the 1962 Geneva Agreement the United States began supporting them in a fight against the communists, which the Hmong embraced. The United States used them as an irregular force against the communists for the remainder of the United States' involvement in Laos.

Although the Hmong were not working to overthrow an existing government, they still provide an example of UW. The communist forces had taken control of portions of Eastern Laos including areas of traditional homeland areas of the Hmong, presenting an occupying power for the Hmong people to act against. Additionally, the Hmong used irregular tactics and were supported extensively by the United States government in order to make them an effective force against the communists. Therefore, the Hmong conflict with the communists is an example of UW where the United States used an indigenous people to fight a conflict to further the U.S. goal of reducing the spread of communism.

The conflict in Laos was actually two conflicts. One was the fight against the communist forces trying to take over the government of Laos, which mostly included the Pathet Lao forces' attempts to attack the government of Laos. The other conflict was the United States' attempts to attack the Vietnamese supply routes in Eastern Laos, which they were using to supply forces in Southern Vietnam.

Because of the political situation and the fact there were no military members belonging to the regions military commander in Laos, the U.S. Ambassador to Laos became the leader of all aspects of the covert military activity that took place in this secret war. The CIA led the support to the Hmong and the various ambassadors relied on the CIA officers as their primary military advisors, which caused significant frictions in the relationships between the military and the Ambassador.

The conflict in Laos was always subordinate to the conflict in Vietnam, so when the United States began making efforts to remove itself from Vietnam, it did the same in Laos. The Laos government attempted to reconcile with the communist factions and attempted to form a new government. This signaled the beginning of the exodus of the U.S. from Laos. Shortly after communist forces took control of Saigon, thousands of Hmong fled to Thailand and, shortly thereafter, the Laos government fell to the communists.

Effectiveness

Airpower was used in a number of different ways to support the Hmong and the Laos government. Because of the nature of the terrain in Laos, aircraft were needed to supply forces that were not in the lowland areas of the major Laos population centers. While support to the Laos government could transit Thailand and proceed along ground

lines of communication to the low lying areas, support to forces in mountainous areas, especially the Hmong, needed to be moved by air (Castle 1993, 85). The Hmong did not have roads or airfields near most of their villages, and this lack of infrastructure created organizational, training, and resupply difficulties. Resupply by air became the primary means of providing the required food, weapons, and equipment (Haas 1997, 167).

How exactly this air support was accomplished is not straightforward. Because of the Geneva Agreements prohibition of military aid, the support of paramilitary organizations had become the business of the CIA. The CIA used their contract company Air America, recently changed from Civilian Air Transport, to provide the needed airpower (Haas 1997, 167). Air America operated a number of different aircraft throughout their time supporting operations in Laos. In order to conduct the resupply, Air America would usually airdrop needed equipment or food using C-46s. Helio Couriers are small single-engine short take-off and landing (STOL) aircraft that can land and take off at very low speeds, and thus can operate out of very austere airfields. Air America used these aircraft to transport people and supplies to isolated mountain outposts (Trest 2000, 109). The Helio Couriers operated out of small dirt strips, referred to as lima sites, usually built by the Hmong themselves on mountain tops or on ridge lines.

The Hmong needed more than resupply, however, and soon there were plans to use B-26s as attack aircraft to strike communist positions inside of Laos. Known as Operation Mill Pond, it was staffed by a mix of Air America pilots and USAF volunteers who were sanitized of their connections to the USAF. Mill Pond was scheduled to take place hours after the Bay of Pigs invasion and was cancelled as President Kennedy dealt with the ramifications of the failure of the events in Cuba.

The next effort to provide fires support to the Hmong was named Water Pump. This operation involved training pilots to use AT-28s to support military operations in Laos. Originally intended to train Asian pilots to support operations, the American Ambassador in Laos requested that civilians be allowed to operate the aircraft. Thus the first pilots trained to operate the AT-28s were American civilians, who were largely pilots already working for Air America. The political consequences of having an American civilian shot down and taken prisoner was seen as too risky so the "A team," as they came to be called, were severely limited on the missions that they could fly. The answer to this problem was to use Thai volunteers, who were also sanitized and flew in civilian flight suits with no rank. The Thai pilots became known as the "B Team" and, although were not considered as capable, they provided the ability to conduct missions that were considered too risky for their American counterparts. Eventually the Hmong requested that they be trained as pilots for the AT-28 as well. At first their request was denied, but eventually Hmong pilots, some of whom had never driven a vehicle before, let alone flown an airplane, were trained to fly the AT-28. While the "C team" as a whole were considered even less capable, they did have the advantage of knowing the language of the Hmong on the ground, who they supported, and having the motivation to aid their countrymen. The Hmong pilots were committed to supporting their people, and this meant there was not a limited tour for them as pilots; they simply flew until they were dead, and by the end of the war 16 of the 19 trained Hmong pilots were killed (Haas 1997, 184).

Beginning in 1964, the United States began flying armed reconnaissance flights over Laos at Prime Minister Phouma's request in response to recent communist attacks.

These missions were the beginning of a number of different operations that supported both the Hmong irregulars and the U.S. efforts to reduce the flow of North Vietnamese troops and supplies along the Ho Chi Minh trail. The most significant of these operations was known as Operation Barrel Roll, which started in December 1964 as pre-planned strikes against targets along the Ho Chi Minh trail, but by April 1965 had transformed into close air support sorties for Hmong irregulars (Denehan 2008, 25). Operation Barrel Roll began as a low priority and averaged around 300 sorties per month, but because of changes in strategy in Vietnam began averaging 200 sorties per day by mid 1969 (Denehan 2008, 30). These missions were conventional USAF aircraft supporting the irregular Hmong forces. While the Hmong had a tremendous amount of fire support by 1969, they also could not prevent significant communist advances in 1970 including the loss of the strategic Plain of Jars (Denehan 2008, 30).

The airpower support to the Hmong was effective because it allowed the Hmong to fight against the communists who invaded their territory. While the Hmong probably would have resisted the communists without any outside assistance, they would have had little hope of success without the modern weapons and the logistical support provided by the U.S. One of the main reasons for this was that the military campaign greatly disrupted the villagers' lives, and for a Hmong male to commit to military service he needed to be sure that his family would be taken care of. To ensure a constant supply of Hmong soldiers ready to fight for long periods of time, they had to make sure that Hmong families were provided with regular shipments of food. One CIA station chief said "the knowledge that their families would be cared for . . . was a factor in persuading the tribesmen to join the irregulars, for in those hills the only protection for a village rests

with the men of that village. Thus a tribesman was unlikely to accept a commitment to serve as a full-time soldier away from his home unless he was assured that his family would be cared for in his absence" (Castle 1993, 58). It can be concluded that the aerial resupply efforts were effective because the Hmong were dedicated to fighting the communist forces until the American withdrawal ended the air support.

Certain aspects of airpower's support to the Hmong were more successful than others. Without airpower, the Hmong would never have been able to oppose the communist forces for as long as they did. The mobility and resupply allowed them to recruit new members for the irregular forces by ensuring their families would be cared for, as well as provided the Hmong with the weapons needed to oppose the communist forces. Additionally, irregulars in Laos were only shown to be effective when backed with airpower and logistical efforts (Castle 1993, 121). The fires support provided by both the special operations aircraft flown out of Thailand and the conventional Air Force's close air support sorties provided the Hmong with a much greater ability to take on the numerically superior communist forces for years. Airpower did not prove to be enough support for the Hmong, even with the significant number of sorties available by 1969, and eventually had significant loses. Once the airpower support was withdrawn, the Hmong could no longer pose a significant resistance to the communist forces and the government of Laos fell shortly thereafter. Airpower was effective in making the Hmong an effective fighting force, but it did not succeed in the military objective of defeating the communist forces. Therefore, the use of airpower to support the Hmong can be described as desirable.

Efficiency

The cost of supporting the Laos struggle against the communists can be examined on a number of different levels. The first is the cost of supporting the military action against the communists itself as opposed to other military action. The second is the cost of using the Hmong as the primary means of attack instead of the forces of the Government of Laos. Finally, the cost of the use of airpower itself can be examined.

Laos was considered one of the key battlegrounds in stopping the spread of communism, and once it became clear that it would be a battleground, a number of options were contemplated. Strong military intervention as late as 1961 was considered; the JCS requested "120,000 to 140,000 men with the authority to use nuclear weapons if necessary" for a show of force (Castle 1993, 41). Vietnam, with its easy access to the sea and supply routes, was seen as a preferable location to become involved in a military confrontation, as opposed to landlocked Laos. In an effort to keep from being drawn into a large overt military conflict, the United States sought a diplomatic solution. That diplomatic solution allowed the superpowers to avoid outright confrontation, but also presented a situation where covert military action could easily take place.

This covert action was accomplished by attempting to make the troops of the Lao government an effective fighting force against the communists and by creating an effective irregular force that could also be used to supplement the fight. The Lao military, despite a tremendous amount of military aid, was never turned into an effective military force because of its corruption and the willingness of the lowland government to let the highland Hmong fight the battles and take the casualties. The most effective resistance to the advancement of the communists was the irregular forces and the Hmong were a

majority of the indigenous Laos effort. The other effective units were the Thai units that also fought an irregular fight against the communists.

This is significant to airpower because although a majority of the military aid to the Laos government could come by land to the low lying areas, the support of the Hmong and irregular forces was accomplished almost completely by air. Therefore, in order to effectively provide a resistance to the communist attempt at a takeover in Laos, the two options were a large-scale overt military intervention, or covert support to an indigenous people that could only be effectively accomplished by airpower.

The cost of the use of airpower in Laos on some levels is hard to fully examine. This is partially because of the secrecy of the operations. For example, the actual number of B-26s used in Operation Mill Pond is in doubt because of the classification level, which resulted in a lack of detailed records. It is also hard to examine the cost of the loss of aircraft because of the level of secrecy required (Haas 1997, 171).

What can be examined is the amount of effort put into the air operations in Laos. During Operation Water Pump, only 41 USAF personnel were needed to stand up the program and begin providing trained air support for the Hmong troops (Denehan 2008, 17). This is a very small number of U.S. military members to produce an effective close air support capability for the Hmong.

Additionally, there is the use of the jet aircraft by the USAF used to both target the transit routes to Southern Vietnam, and to support the Hmong to varying degrees at different times. Considerable debate arose about the use of slower propeller driven aircraft, including the A-26, AT-28, and A-1, used by the Air Commandos, the USAF term for Special Operations before 1969, versus the state-of-the-art jet aircraft used by

the conventional Air Force. Starting in 1966, Air Commando units, flying propeller aircraft from a base in Eastern Thailand, struck targets in the southern Laotian panhandle along the transit routes to Southern Vietnam, and in December of that year were credited with 80 percent of the truck kills while flying only 7 percent of missions (Haas 1997, 199). Ambassador Sullivan noted the success of the Air Commando units and pressed to have them placed under his control for operations in Northern Laos. After his request was denied, he pressed for an analysis by the Office of the Secretary of Defense of the effectiveness of propeller aircraft versus jet aircraft versus ground transport targets. Based on data from the first eight months of 1967, the analysts determined that the propeller aircraft were nine times more effective, but four times more vulnerable than jet aircraft. Based on the cost of the sorties required and loss rates, the analysts also found an almost 14-to-1 cost advantage for the propeller aircraft. In mid-1968, a second report found a 20-to-1 ratio, with the cost per vehicle destroyed by a F-105 equaling $118,000 compared to $5,900 for an A-26 (Haas 1997, 207). The USAF was more interested in becoming an all-jet force and, even though the Navy had 150 additional A-1s available, the USAF made no requests for the aircraft. The USAF also had additional A-26s available, but they were assigned to Panama and were not allowed to replace the combat losses of the A-26s in Thailand, resulting in the A-26s leaving the theater in 1969.

Supporting the Hmong as a force to counter the Pathet Lao was significantly more cost-efficient than other options. The use of U.S. ground forces could have easily totaled over 100,000 as evidenced by the JCS plan for a conventional show of force. Support to the Lao government’s military forces was maintained throughout the conflict, but they never proved to be an effective force. Substantially more money, equipment, and

personnel would have been required to possibly make the Lao government forces effective. With a relatively small number of aircraft compared to the thousands used in Vietnam, Air America and Air Commando units were able to provide enough mobility and fires support to keep the Hmong effective for years. Due to the nature of the terrain and lack of infrastructure, this resupply could only effectively be conducted by air. The use of conventional aircraft by the USAF later in the conflict to provide fires support did not prove to be as efficient based on the number of sorties flown for the effects gained. Because of the significant effects produced by the Hmong for a relatively low cost, the efficiency of the use of airpower to support the Hmong UW effort was desirable.

Unity of Effort

The conflict in Laos was extremely complicated, and was made more so by the number of players on the side of the United States. The United States Ambassador was solely responsible for American actions inside Laos, which created a difficult working environment on several different levels. Additionally, there were multiple agencies trying to provide support to different aspects of Laos including the United States Agency for International Development (USAID), the U.S. military and the CIA, who were the lead in supporting the Hmong. This created problems in air support because it created a number of different entities that were used. So air support was provided by not only the CIA proprietary airline Air America, but to introduce another layer of non-attribution, the CIA also employed other contract airlines to provide support, including Bird and Son (Conboy 1995, 63), as well as Air Commando units and regular USAF aircraft.

The authority of the Ambassador over the military activity in Laos stemmed from President Kennedy's attempt to improve the operations of American diplomatic missions.

After the Bay of Pigs President Kennedy sent a letter on 29 May 1961 to all American ambassadors abroad which stated:

> You are in charge of the entire U.S. Diplomatic Mission, and I expect you to supervise all of its operations. The Missions includes not only the personnel of the Department of State and the Foreign Service, but also representatives of all other United States agencies . . . As you know, the United States Diplomatic Mission . . . does not . . . include United States military forces operating in the field where such forces are under the command of a United States area military commander. (Castle 1993, 54)

Military activity in Laos was not under the command of an "area military commander" due to the restrictions of the 1962 Geneva Agreements, therefore, the ambassador became the commander of all United States activity, to include all military activity. During the period from the 1962 Geneva Agreements to the eventual communist victory in 1975, there were four Ambassadors to Laos all of which used this authority to more or less run almost all aspects of the American military effort in Laos.

The most influential of these Ambassadors was William H. Sullivan, who was Ambassador to Laos from 1964 to 1969. He used the authority of the Kennedy letter to manage all military action that occurred in Laos. The command of military operations by a member of the State Department did not sit well with the military establishment, but there was little that they could do and Admiral Sharp and General Westmoreland quickly came to call Sullivan "the field marshal" (Castle 1993, 79). Sullivan controlled military activity to such an extent that "there wasn't a bag of rice dropped in Laos that he [Sullivan] didn't know about" (Castle 1993, 91). The embassy had military attachés to act as military advisors to the Ambassador, but it was widely believed by the USAF officers supporting efforts in Laos that CIA officers acted as the ambassador's primary military

advisors and that the attaché did little more than carry out the orders of the CIA (Castle 1993, 89).

The two conflicts were significantly interrelated, but one individual did not control all of the military actions. This would not be as significant if the Ambassador to Laos and the U.S. Military leadership had a good working relationship and effectively coordinated military action. This was not the case, and the Ambassador, especially Ambassador Sullivan, made decisions based on his personal judgment with little regard to advice given by the military members, whether they were on his staff or not. This resulted in little coordination between the efforts of military action in Laos and military action in the Vietnam conflict.

This arrangement allowed the Ambassador to use the aircraft dedicated to supporting operations in Laos as his personal air force. This resulted in the control of the aircraft supporting Laos at times lacking effective and efficient coordination. While Air America worked for the CIA, they also flew for whoever needed air support in Laos. This meant they flew for a number of different customers including USAID, the CIA and other agencies. It was not uncommon for several aircraft to take off from one location and all make deliveries to the same place because no coordination had been accomplished (Trest 2000, 107).

The unity of effort of military operations was strained because of the poor relationship between the U.S. Ambassador to Laos and the U.S. Military leadership conducting the war in Vietnam. As a result, little coordination was accomplished to ensure that operations in both countries were working toward the same objectives. The use of airpower suffered under this relationship, and there was little coordination

accomplished that could have brought synergistic effects of airpower against the communist forces. Because of the numerous problems with airpower and the unity of effort it will be considered less than desirable in its application.

GAAT Scenario

The U.S. Army's Command and General Staff College has developed a conflict scenario in the Caucasus that is used for several planning exercises throughout the year. This scenario, known as the GAAT scenario, referring to Georgia, Armenia, Azerbaijan, and Turkey, provides an established scenario to use as a case study to examine the capabilities of AFSOC in a mission supporting UW.

The scenario takes place in the near future, but the political situation of the region is somewhat changed. The Northwestern portion of Iran has separated and declared itself an independent state calling itself Ahuristan. Ahuristan is not recognized by most countries, but has effectively limited Iranian influence in its political activities. Ahuristan's population is mostly ethnic Azeri and as such has a strong connection with the people of Azerbaijan, whose population is also made up of a majority of Azeri.

The new country of Ahuristan has little in the way of natural resources and sees the oil rich Azerbaijan as a means to acquire oil and natural gas resources. Ahuristan has begun organizing troops for a possible attack into Azerbaijan to capture the oil fields and threaten the capital city of Baku. The other aspect of their strategy is to support an active political movement in southern Azerbaijan dedicated to separating southern Azerbaijan from the rest of the country and joining Ahuristan. The political movement has a military arm that conducts terrorist-type activities within the country of Azerbaijan itself.

This scenario is then used to plan various responses from the United States and the world community to the aggression of Ahuristan toward Azerbaijan, from the range of flexible deterrent options to military actions once Ahuristan attacks Azerbaijan. As such it presents a well-developed situation to examine a potential for UW scenario.

UW should be used to further the United States strategy in a region. Although Special Operations have come to be thought of as instruments of precision, UW should be planned as more of a blunt object with minimal control than one of surgical precision. In this scenario UW could be used to destabilize the government of Ahuristan in order to prevent their aggressive actions or, more likely, to commit a significant amount of military forces and effort to deal with the internal instability, thus reducing their ability to project military power into Azerbaijan.

UW is accomplished by, with, or through indigenous forces; therefore, a group opposed to the Ahuristan government would need to be found. This group may already be actively opposing the Ahuristan government with force, or it could simply be a group of people that given the right support could effectively rise up in arms against the government. Ahuristan has three potential ethnic groups that could aid in UW against the government. The Talysh people live along the East coast of Ahuristan and their population is split between Ahuristan and Azerbaijan. They are a relatively small population, but they do have a history of desiring autonomy that could be exploited. The next ethnic population is the Azeri peoples themselves, who make up the majority of the population of the new country of Ahuristan and are roughly centered in the middle of the country. Any opposition group would be composed of Azeris acting against their own ethnic group, which would increase their security requirements, making it difficult to

effectively provide support from outside Ahuristan. The final ethnic group is the Kurdish population on the mountainous western region of Ahuristan; they make up a significant sized population that has repeatedly attempted to establish a separate state.

The Kurdish population is spread across northern portions of Iraq, and eastern portions of Turkey and Syria, and has had many ties with the United States in the past. It is likely that the Kurdish people would view the establishment of Ahuristan as an opportunity to further their goals of an independent state by trying to form an autonomous region inside the new Ahuristan. This would create some tension with the governments of Iraq, Turkey, and Syria, who have gone to great lengths to prevent the establishment of an independent Kurdistan. This would place political limits on the amount and type of support provided to the Kurds, but this is not an insurmountable obstacle, and the benefits of supporting the Kurds in an effective opposition to Ahuristan may outweigh the costs. So, for the purposes of this case study it will be assumed that some military support can be provided to Kurds without an unacceptable amount of political opposition.

The type and amount of support provided to the Kurds would need to be carefully weighed against the United States plan for dealing with the political situation. Ideally, it should be an integrated part of the overall strategy to limit Ahuristan aggression, and incorporated into the Combatant Commander's plans. As shown in the previous case studies, irregular warfare movements need certain types of support to help make them effective. The first is the supply of weapons and equipment to irregular forces that do not have access to the appropriate weapons, or cannot move them because of terrain or other

restrictions. This would be accomplished by shipment overland, by airdrop, or by airland if airfields are available.

The next type of support would be in providing military advisors, most probably in the form of Special Forces (SF) teams known as Operational Detachment Alphas (ODA). SF troops are specifically trained to work with indigenous populations and to help train them to become an effective fighting force. ODA teams would improve the ability of the Kurds to conduct military action against the Ahuristan government. They would also provide an ability to coordinate with other forces. This would allow Kurdish groups to better request and coordinate support and organize the actions of individual Kurdish groups to be able to support the overall plan against Ahuristan. It is important to remember the Kurdish forces are not under the command of the United States and are not really even part of a coalition, consequently they may not perform exactly as envisioned, but they can be expected to act in their best interest. The ODA teams would infiltrate Ahuristan either on the ground from other areas of Kurdish territory, or would be flown into country and airlanded if possible or airdropped if needed.

The Kurds would benefit from the mobility offered by aircraft. This would allow rapid movement of forces to or from an objective, as was practiced by the Hmong in Laos. It would also provide mobility for military leaders to increase their ability to coordinate military operations. The ability to evacuate wounded troops is also significant in increasing the morale of the troops. Historically, irregulars have demonstrated less aversion to risk if they believe they have a reliable means of evacuating wounded by air in the event of casualties.

If possible, the ability to provide fire support to Kurdish irregular forces would greatly enhance their combat capabilities. Specific aircraft dedicated to supporting the Kurdish irregular forces could provide this support, or it could be provided by strike platforms controlled by the Joint Force Air Component Commander (JFACC), and the level of support by the JFACC would provide would be determined by his priorities.

Effectiveness

The ability of AFSOC assets to support this UW scenario would be affected by a number of factors. The most important factors would be the degree of secrecy required and the level of threat to aircraft operations in Ahuristan.

The two previous case studies provided examples of situations where secrecy was key to accomplishing the UW mission for different reasons. In World War II, secrecy was essential, not to hide the U.S. involvement in the conflict, but to protect the irregular forces on the ground. While in Laos, secrecy was important to limit the perceived involvement of the U.S. government in the conflict more so than the protection of the irregular Hmong forces.

If the situation called for the support of the Kurdish forces by the United States to be kept secret, the ability of AFSOC to provide the support would be greatly hampered. Due to increases in the technological capabilities of sensors and communications, supplying the Kurds by military aircraft would be difficult to keep a secret. While the MC-130s and CV-22s would be capable of providing the needed delivery of supplies and mobility, they would be obvious indications of U.S. involvement.

If keeping knowledge of U.S. involvement a secret was not as critical as supporting the Kurds, then MC-130s and CV-22s could be used in both the delivery of

supplies and the movement of personnel. The MC-130 provides a significant lift and airdrop capability, but requires a suitable airstrip to land. The CV-22 provides the speed and defensive capabilities of a fixed wing aircraft, while its tilt rotor capability allows it to land like a helicopter. These capabilities would provide a significant advantage to supporting an irregular force that may not be able to secure and hold an airstrip, or has mobility requirements that cannot be met by airdrop. The CV-22 would be able to quickly provide mobility to move small numbers of forces or provide casualty evacuation. Disadvantages of the CV-22 include limited cargo capacity and its unique appearance.

The threat level will have a significant impact on the amount of support that can be provided by air. In the scenario, Ahuristan maintains most of the air defense systems that Iran had in place in the Northwestern portion of the country, and although the fact that this air defense system remains intact may not be very realistic, it does provide a significant problem for the JFACC to overcome in any exercise involving military force. This air defense system presents a significant problem for AFSOC aircraft supporting UW operations inside Ahuristan. While the MC-130s and CV-22s would be able to penetrate the Ahuristan air defenses, Ahuristan would most likely detect their presence and, given time, could adjust their defenses to provide a significant threat to MC-130 and CV-22 operations. This threat to the MC-130s and CV-22s could be countered in a couple of ways. First, the threat of eminent attack by the JFACC forces would keep the air defense forces focused on defending themselves and the rest of Ahuristan. Second, the AFSOC forces could integrate with the JFACC aircraft that could suppress the enemy air

defenses and provide other support to protect the AFSOC missions. This support would depend on the JFACC's current priorities and aircraft availability.

In this scenario, the UW operations would be conducted as part of the overall military plan against Ahuristan. Once the JFACC engaged the Ahuristan air defenses, the threat to aircraft supporting UW would be greatly diminished, and support to Kurdish irregulars could be easily accomplished by MC-130s and CV-22s. Additionally, AFSOC fire support assets would then be able to provide support to the UW effort. Because it is unmanned the MQ-1 may be an exception, and commanders may be willing to risk operating an MQ-1 in a higher threat environment because there would be no threat to personnel. However, the MQ-1's limited defensive capabilities and limited striking ability may make its effectiveness marginal.

Additionally the CAAs of the 6th Special Operations Squadron could be used to support the UW effort. In this scenario CAAs could provide instruction to Kurdish pilots on how to effectively support their irregular forces with airlift, aerial delivery, and close air support. This support obviously requires the Kurds to have aircraft to operate, which may need to be provided by the U.S. government, and could include rotary wing or light fixed wing aircraft. To be most effective, the CAA would be in place early enough to ensure that the Kurds would have some organic air support capability to support operations before AFSOC aircraft would be free to operate.

Whether AFSOC would be able to provide effective support in this situation is questionable. Because of its irregular nature and need to develop personal relationships on the ground, conducting UW is usually accomplished over the long term. Because of the scenario threat level, AFSOC air support would not be able to effectively operate

until significant air assets were in theater; however, the use of CAAs could provide the Kurds with some organic support capability before AFSOC aircraft could be effective. Once a significant U.S. presence arrived in theater and shortly before the JFACC engaged the Ahuristan air defenses, AFSOC aircraft could provide supplies and mobility. After the air defenses were reduced, the mobility aircraft would be able to operate relatively freely and fire support assets would then be able to provide effective support. AFSOC's effectiveness in supporting UW in this scenario would be desirable.

Efficiency

The measure of the cost of the use of airpower to support UW operations can be examined from several perspectives. The amount of aircraft lost in the operation, the cost of using the aircraft, and if support could have been provided by an alternative method. Because of the unpredictable nature of UW and the uniqueness of each situation what cannot be evaluated is the benefit of the UW campaign in accomplishing the overall theater strategic objectives versus the cost of the support.

Although it is difficult to predict the benefit of UW to the overall strategic theater objectives, recent conflicts have shown the value of UW. In the beginning of Operation Iraqi Freedom, after Turkey refused to allow the basing of U.S. forces, the Kurdish UW effort became the primary means of holding 12 of Iraq's 20 divisions in the North, preventing their movement to oppose the invasion from the south (Grdovic 2008, 34). During the first months of Operation Enduring Freedom, UW was used to help bring about the defeat of the Taliban by using Special Forces teams to aid in the coordination of the actions of indigenous Afghanistan forces. These two instances illustrate the potential

benefits of UW without incurring undo cost in the form of U.S. military personnel or assets.

The level of risk accepted by the commander would most likely determine the aircraft losses. In recent conflicts the risk assumed, in regards to enemy capability, has resulted in no losses of MC-130s due to enemy activity. Three MC-130s have been lost in the operating environments of Iraq and Afghanistan due to accidents, caused at least partially by the acceptance of risk by aircrews to accomplish missions. In the same environment seven MH-53s were lost, three of which due to enemy activity, and the rest due to accidents, again at least partially caused by the acceptance of risk in a hazardous environment. The CV-22 is a new aircraft with better defensive capabilities than the MH-53 (Young 2009, 134-137). But, its ability to land like a helicopter means it would be employed in a tactical environment similar to the MH-53. If approximately the same levels of risk were accepted, then a small number of aircraft could be expected to be lost. The risk of loss would certainly be present, due as much to the acceptance of risk for mission accomplishment as to enemy activity.

AFSOC aircraft do not fall under the control of the JFACC, but are assigned to the Joint Force Special Operations Component Commander (JFSOCC). AFSOC aircraft used to support the UW effort would not be detracting from the overall air effort, as was the case in World War II. Additionally, the missions would not require any additional training as AFSOC aircrews train specifically to accomplish the missions required to support UW. The largest cost to the JFSOCC would be the loss of the use of the AFSOC aircraft for other special operations missions. There would be some other costs to the JFACC. If there were a limited number of airfields, a large number of AFSOC aircraft

would compete for ramp space. Additionally, any requests for support to the AFSOC aircraft or to the Kurds directly would limit the sorties the JFACC could use for other purposes.

The use of CAAs to advise and assist the Kurds to improve their own airpower capability could significantly reduce the risk of the loss of U.S. aircrews and aircraft. The most significant cost would be costs associated with providing the aircraft and required logistics, which could be substantial depending on the number and type of aircraft.

The other aspect to consider in the evaluation of efficiency is if other methods of supplying the Kurdish irregular forces would be as effective as air support. The area of Ahuristan with the majority of the Kurdish population is very mountainous, which would make resupply by land difficult and time consuming, but not impossible. Even with air assets providing airlift for resupply efforts, some of the logistical support would most probably travel by ground. This means that the priority for air transport would be time-critical items and personnel movements.

The other alternate method of supporting the UW campaign is to hire contract aviation to perform the air support. This would be similar to how Air America supported the Hmong in Laos, with the difference being that the U.S. Government would not directly own the company hired. This would negate the risk to U.S. crews and aircraft, however there are other risks associated with the use of contractors. Contractors would also use commercial aircraft, and although not as capable as the military aircraft, would not be an obvious indicator of a military presence, which would aid in maintaining secrecy and could be used well before AFSOC aircraft. Using a contractor may not be as effective as military support, a contractor's motivation is monetary gain and if they find

the risks to be too great they may abandon their contract. This happened in the support of the Hmong, where the loss of one of the contract airline's aircraft and crew caused an end to their involvement in the operation (Conboy 1995, 64). Additionally, the contractor's actions, procedures, and personnel will not be as tightly controlled as military assets would be, which could result in a number of different consequences. However, with minimal U.S. personnel involvement on the ground supporting the Kurds this may be the preferred arrangement for providing support. A large number of Special Forces teams on the ground may necessitate the certainty of direct military support.

Because of the uncertain nature of UW and the unknown contribution of the UW campaign to the overall military objectives, it is difficult to make an evaluation on the efficiency of the use of aircraft in support of the UW campaign. However, recent experiences in beginning of Operation Iraqi Freedom and the initial few months of Operation Enduring Freedom show the value of working by, with, and through indigenous populations to accomplish military objectives. The loss of aircraft would most likely be limited, but would depend on the commander's assumption of risk. Today's increased threat environment makes the employment of aircraft in support of UW operations more difficult, requiring more of an investment of assets, manpower and personnel to ensure that the mission is accomplished without losses. The efficiency will greatly depend on the specifics of a given situation, but in this scenario the efficiency of airpowers support to UW would be desirable.

Unity of Effort

The unity of effort would be significantly improved over the previous case studies examined. The aircraft are already designated to perform special operations missions, and

are assigned to the JFSOCC. As part of the Special Operations Component they would be part of the special operations plan of the Joint Force Commander (JFC), and would not be serving multiple masters as has happened in the past.

Currently AFSOC is a major command in the USAF that owns its own aircraft for the use in special operations. This is significantly different from the ad hoc nature of air support provided in both World War II and the Laos conflict. In World War II, there was no established organization for the support of special operations, which caused several problems including a lack of aircraft and trained aircrew. In Laos a similar situation existed where aircraft had to be procured and modified and aircrews trained after the conflict began. AFSOC has dedicated aircraft and aircrew trained in the employment of these aircraft in special operations.

Once assigned to a theater, AFSOC aircraft would be under the operational control of the JFSOCC. This means that AFSOF would be under the control of a special operations commander working directly to achieve the special operations objectives. The JFSOCC also works directly for the JFC, which insures that the special operations objectives support the JFC's overall theater strategy, and hence ensures unity of effort.

This allocation of forces reduces many of the concerns present in both World War II and Laos. In World War II, the commanders of the USAAF were concerned that the dedication of aircraft to special operations took needed aircraft away from the strategic bombing campaign and the AAF's objectives. In Laos, where the Ambassador to Laos had control over operations in country, the concern was if the operations in Laos were working towards the same objectives as the rest of the military forces in theater. By having dedicated aircraft and trained aircrews working for a special operations

commander, it helps ensure airpower will be available to help accomplish special operations and therefore contribute to the special operations portion of the JFC's strategy, which helps ensure unity of effort. The contribution of airpower to the unity of effort in this scenario would be optimal.

Summary

The three case studies vary greatly in the application of airpower to support a UW campaign. In World War II, getting dedicated aircraft and aircrews to support the French resistance movements was a significant obstacle. Once aircraft were allocated and flying missions, they were able to effectively provide a level of support that was unattainable by other means, helping to ensure the success of the French resistance. In Laos, providing support to an irregular force proved to be more difficult because of the secret nature of the conflict. Multiple organizations each serving multiple masters provided air support to the Hmong, creating a system that lacked coordination. The support was effective in that it allowed the Hmong to become an effective fighting force against the communists, but it also was ineffective in that the Hmong ultimately failed to prevent the Pathet Lao from taking over Laos. In the GAAT scenario, the effectiveness of airpower is endangered by today's increased threat environment, however, the existence of dedicated aircraft and trained aircrew provide an increased unity of effort toward the accomplishment of the overall theater objectives. The comparison of evaluation criteria is shown in table 3.

Table 3. Evaluation Comparison			
	Effectiveness	Efficiency	Unity of Effort
WWII	Optimal	Optimal	Desirable
Laos	Desirable	Desirable	Less than Desirable
GAAT Scenario	Desirable	Desirable	Optimal

Source: Created by author.

The analysis in this chapter shows that the answer to the primary research question of whether AFSOC can support UW operations with mobility, resupply and fires is yes, but different circumstances would limit their effectiveness. In a high threat environment AFSOC assets would depend on JFACC aircraft to ensure they could complete their mission. In a situation where UW was not part of a larger military campaign and there was not a significant JFACC presence, then AFSOC would be able to provide support if the threat level was low. The use of AFSOC assets may not be desirable in situations where obvious U.S. military involvement is unacceptable.

This chapter analyzed the application of airpower to support UW in three different cases, which included U.S. support to the French resistance movement, support to the Hmong in the conflict in Laos, and a hypothetical modern UW scenario. Each case study was evaluated against the evaluation criteria of effectiveness, efficiency, and unity of effort. The next chapter will present the conclusions and recommendations.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the conclusions and recommendations derived from the analysis completed in chapter 4, which sought to answer the primary research question of whether AFSOC's airpower assets can currently support UW operations with mobility, resupply and fires. Chapter 4 examined the use of airpower to support UW operations in three case studies including the U.S. support to French resistance movements in World War II, the U.S. support to the Hmong during the conflict in Laos and a modern day hypothetical scenario in the Caucasus region.

The analysis in this chapter shows that the answer to the primary research question is yes, but different circumstances would limit their effectiveness. In a high threat environment AFSOC assets would be dependent on the JFACC support to ensure success. In situations where obvious U.S. involvement is undesirable, the use of current AFSOC aircraft may not be acceptable.

Conclusions

The French resistance to German occupation was the first use of aircraft to support an insurgency on a large scale, and revealed several lessons. The aircraft and the parachute allowed for the French resistance to be supplied with arms and equipment, while also allowing for agents to be infiltrated into the resistance groups for intelligence and coordination purposes. The success of the French resistance movements demonstrated that airpower could be used greatly improve the effectiveness of an irregular force that otherwise would have been limited by its lack of arms and connection

with other forces. The vast majority of support provided to the French resistance was accomplished by aerial delivery of supplies and personnel. A limited amount of mobility was provided, where personnel were infiltrated or exfiltrated by landing, but this was very limited in comparison to the resupply effort. Additionally, aircraft were not used in any significant way to provide fires to French resistance groups to increase their effectiveness.

One of the lessons revealed in this conflict is that the level of secrecy will be dependent on the relative strength of the two forces in conflict. In the beginning of the buildup because of the strength of the occupying German forces compared to the French resistance groups, the requirement for secrecy was paramount. Much care was taken to ensure that the location and timing of the drops was kept from the Germans who had the ability to inflict devastating losses to a resistance group if they could gain intelligence on their planned location or movements. As the Germans strength in France was reduced, the necessity for secrecy was also reduced and the French resistance groups were able to operate much more freely.

The problems associated with designating aircraft and aircrews to perform these missions also reveals the underling difficulty in developing a special operations capability after the beginning of a conflict. The allocation of aircraft and crews to special operations was a major political battle that reached the highest levels of the military establishment and took a considerable length of time to resolve. Had aircraft been designated and aircrews trained to perform special operations missions, the support to the French resistance movements and intelligence operations could have greatly aided the

allied war effort. Had aircraft never been designated for the special operations missions, the OSS's contribution to the unity of effort would have been substantially reduced.

As one of the first proxy battlegrounds of the cold war, the conflict in Laos was fought in a much different political context than World War II and, consequently, the support to the French Resistance was much different than the support provided to irregular forces in Laos. The use of the Hmong as an irregular force to oppose the armies of the Pathet Lao and North Vietnam allowed the U.S. to oppose the spread of communism without the use of a significant military presence in Laos itself.

Just as with the French resistance, the use of aircraft for mobility and resupply proved to be essential in making the Hmong an effective irregular force against the Pathet Lao. The supply effort allowed a poor and undeveloped indigenous people to successfully oppose a larger force for a significant period of time. Without this support, the Hmong would still have resisted the communists, but the need for the men to stay in the villages to grow crops and their lack of modern weapons would have made them ineffective.

Once the Hmong became an effective force against the Pathet Lao the relative difference in power was much less than with the French resistance and the German occupation. The Hmong were not strong enough to act as a conventional force against the communists, but they were not under the same threat of immediate attack if their presence was made known and had a much greater freedom of movement then the French resistance. The Hmong still relied on secrecy as a required element of IW, but it was not as essential for their survival as it was for the French resistance. However, secrecy was still important for other reasons, most notably to conceal the extent of the U.S. involvement in the conflict.

In Laos, as opposed to World War II, aircraft were used to provide fire support to directly aid the limited number of Hmong in their fight against the Pathet Lao. This was done in a number of different ways, but the most important fire support was provided by single engine AT-28s that were flown by Hmong, Thai, and American pilots. These pilots had all been trained by USAF personnel to provide a means of air support to the Hmong irregulars. Additionally USAF aircraft flew strike missions in support of the Hmong forces on the ground. Although, by 1969, the USAF was providing a significant amount of sorties dedicated to providing fire support to the Hmong, it was not enough to ultimately make the Hmong successful in their battle against the communists. Simply throwing sorties in support of a weaker force challenging a stronger force does not ensure the success of the weaker force.

The political situation in Laos created a split command structure that significantly detracted from the unity of effort. The supposed neutrality of Laos, which limited the U.S. military's official presence in the country, combined with the powers bestowed by President Kennedy to U.S. Ambassadors that gave them control all U.S. government personnel in a country, including military members not under the command of a "area commander," created a situation where the Ambassador became the de facto commander for all military activity in Laos. Because of the lack of cooperation between the U.S. Ambassador to Laos and the military commanders in charge of the Vietnam War, there was in fact little means to ensure unity of effort in the two conflicts, even though they were inherently connected.

In the given hypothetical situation based on the GAAT scenario, AFSOC would be able to provide air support to UW efforts when those UW efforts are integrated into an

overall military strategy that includes substantial JFACC assets that would reduce the effectiveness of a robust air defense system. While AFSOC was found to be able to support UW operations several problems were found that should be addressed.

The level of secrecy required will vary depending on the particular situation. In today's operating environment, it will be difficult for AFSOC assets to support UW over a long period of time where secrecy is required. The limited number and distinctive appearance of the assets available to AFSOC combined with technological advances in detection and communication would make military involvement in a UW campaign fairly obvious. If military involvement did not need to be kept a secret then, depending on the threat level, current assets are capable of providing the needed support. In a low threat environment, where the AC-130, MC-130 and CV-22 could operate relatively freely, it would be difficult to keep their activities a secret during sustained operations.

While the invention of the airplane and parachute have made the resupply of UW groups practical, the increasing threat environment has made it more difficult to effectively provide the needed support. To operate for an extended period of time with a significant threat AFSOC aircraft would need the support of JFACC aircraft, to either suppress the air defense system or to attack it directly.

UW efforts are not always associated with a larger military operation. In a situation where it is in the U.S. interest to conduct UW not in conjunction with a larger conventional military operation, then air support may prove to be more difficult. In a limited threat environment, the use of AFSOC aircraft would be feasible, but their identification with the U.S. military would make the support obvious. If the direct support of the irregular forces were not politically acceptable, then the use of CAA advisors may

be the most effective way for AFSOC to help provide air support, albeit indirectly. With an increased threat level, the air support becomes even more difficult and eventually the risk of sustained operations may restrict the use of air support altogether.

With the establishment of AFSOC a dedicated USAF Special Operations capability was created that is controlled under a special operations chain of command. This ensures that aviation assets and trained aircrews will be available to be used for special operations, eliminating many of the problems found in past conflicts. The ability to ensure unity of effort has been markedly increased since the first days of the "Carpetbaggers" support to the French resistance in World War II.

While the organizational aspects of conducting special operations have improved, the increased threat environment and difficulty in maintaining secrecy significantly limit AFSOC's ability to support UW operations in a number of different scenarios. As part of a large military operation, AFSOC would be able to provide adequate support, while in situations where UW is conducted by itself the capabilities of AFSOC would be limited.

Recommendations

In order to improve its capability to support UW AFSOC should address a number of issues. First is a capability to provide mobility, in the form of smaller commercial STOL aircraft which can operate on smaller airfields and which would reduce obvious presence of military forces. Ideally, these aircraft should have some defensive capabilities so that they could operate in more than a low threat environment, but their most significant capability would be able to provide aerial resupply and mobility without being easily identified as USAF aircraft. This would give AFSOC a capability to

support UW operations when it is not politically desirable to use the larger MC-130s or the distinct CV-22s.

In order to provide fire support in UW, AFSOC should develop a fixed wing light attack aircraft. A light attack aircraft could fill several roles, but most importantly it would provide a strike asset that is cheaper and easier to acquire than an AC-130. In addition to expanding AFSOC's ability to conduct IW, an inexpensive and relatively easy to operate strike aircraft would be an ideal airframe for CAAs to provide air attack training to poor countries or other groups to support their IW efforts.

The USAF has a long history of using CAAs to increase the air power capabilities of developing nations, including during the conflict in Laos with the training of Hmong pilots. The 6th Special Operations Squadron currently is AFSOC's standing unit that can provide CAAs worldwide; unfortunately they have limited resources and, although they are expanding, they cannot meet the current requests for their assistance (Montgomery 2007, 7-10). While AFSOC is expanding the 6th Special Operations Squadron, the capability to conduct combat aviation advisory operations is an often neglected part of the USAF and should be further developed and expanded to ensure AFSOC's capability to conduct IW. CAA's ability to develop an organic air support capability for an irregular force greatly enhances AFSOC's ability to contribute to UW.

Colonel Billy Montgomery's AFSOC white paper mentioned in chapter 2 on the USAF Irregular Warfare Concept presents the concept of an IW wing. The idea behind the IW wing is to build partner nation capacity and develop an organization with the flexibility and capability to conduct COIN operations. The IW wing would have a mix of different aircraft including medium lift, light lift, light fixed wing strike, rotary wing, and

ISR assets. These aircraft combined with an increased CAA capability would be used to build partner nation airpower capability and capacity. An IW wing structured as described in the white paper would give AFSOC a formidable organization with the ability to conduct IW. This organization would be capable of more than simply supporting COIN. With the planned aircraft and CAA capability, it could support an irregular force conducting UW. The USAF should invest in establishing an IW wing, increasing its capability to conduct both COIN and UW.

Recommendations for Further Study

This thesis was limited to examining the mobility, resupply and fires aspects of airpower in the support of UW. Further studies should examine the different aspects of airpower that could be used to support UW, including airborne ISR and space based assets. Additionally, the 160th SOAR brings significant capabilities to SOF aviation, and their potential contribution should be examined. A classified examination of recent conflicts could also shed additional light on how exactly airpower has been used in support of UW.

Conclusion

Aircraft have been used in IW since their invention, but unfortunately the USAF has done its best to ignore IW and concentrate its efforts on conventional war. The advantages airpower offers irregular forces cannot be denied and airpower has been instrumental in the effectiveness of many UW campaigns. The establishment of AFSOC as a provider of airpower to special operations has produced dedicated aircraft and specially trained aircrews capable of supporting UW with specialized air mobility,

precision fires, and combat aviation advisory operations. This capability is not without limits and AFSOC should look to expand its IW capability to support the needs of America for the “long war.”

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