

On A Wing and A Prayer:  
A Holistic Vision for Airpower in Small Wars

A Monograph

by

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## Abstract

On a Wing and a Prayer: A Holistic Vision for Airpower in Small Wars by Major Kenyatta H. Ruffin, US Air Force, 76 pages.

The task of a nation's armed forces is to fight and win its wars. For the United States, throughout most of the 20th century through today, these wars have been *small wars*. The US Air Force (USAF) is a key member of the US Armed Forces, but its airpower is often utilized as a mere adjunct capability within small wars instead of being employed in a cohesive operational construct.

This monograph first suggests a method to understand the unique nature of small wars – the Military Power Utilization Model. Next, a brief explanation of the contemporary security environment and a basic overview of the USAF/airpower functions are provided. Then, two historical examples highlight the tangible differences required for airpower in small wars. Subsequently, this monograph argues that a holistic paradigm shift is required within the USAF to make its airpower effective in small wars. Specific recommendations related to USAF airpower employment, organization, training, and equipping are made to achieve the vision of the Air Force Future Operating Concept and fulfill the USAF Chief of Staff's top two focus areas of revitalizing squadrons and strengthening joint leaders and teams. These proposals include doctrinal changes to the definition of close air support, creation of the USAF Air-Ground Expeditionary Center, transformation of the Terminal Air Control Party to a comprehensive Air Integration Team, procurement of a light attack/armed reconnaissance platform, and multiple other improvements to increase the effectiveness and efficiency of airpower in small wars.

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## Acronyms

AFFOC	Air Force Future Operating Concept
AFSOC	Air Force Special Operations Command
AGEC	Air-Ground Expeditionary Center
AGEOS	Air-Ground Expeditionary Operations School
AGOW	Air-Ground Operations Wing
AGTRG	Air-Ground Training Group
AI	Air Interdiction
AIT	Airpower Integration Team
ALB	AirLand Battle
ALO	Air Liaison Office
AMC	Air Mobility Command
ANG	Air National Guard
AO	Area of Operations
AOC	Air Operations Center
AOR	Area of Responsibility
ASOC	Air Support Operations Center
ASOS	Air Support Operations Squadron
BPC	Building Partner Capacity
C2	Command and Control
CAS	Close Air Support
CCA	Close Combat Aviation
CCW	Command and Control Wing
CIG	CAS Integration Group
COIN	Counterinsurgency
COTS	Commercial-Off-The-Shelf
CSAF	Chief of Staff of the United States Air Force



CT	Counter-terrorism
CTS	Combat Training Squadron
DIMEFIL	Diplomatic, Information, Military, Economic, Financial, Intelligence and Law Enforcement
DOTMLPF-P/I	Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, Facilities and Policy/Interoperability
E-OT&E	Employ – Organize, Train, and Equip
EOS	Expeditionary Operations School
F2T2EA	Find, Fix, Track, Target, Engage, and Assess
F3EAD	Find, Fix, Finish, Exploit, Analyze, and Disseminate
FAC	Forward Air Control
GNA	Goldwaters-Nichols Act
HQ	Headquarters
ISR	Intelligence, Surveillance, and reconnaissance
ITC	ISR Tasking Coordinator
IW	Irregular Warfare
JACCE	Joint Air Component Coordination Element
JAGIC	Joint Air-Ground Integration Cell
JCA	Joint Cargo Aircraft
JFACC	Joint Forces Air Component Command
JFC	Joint Forces Commander
JIATF	Joint, Interagency Task Force
JOE	Joint Operating Environment
JTAC	Joint Terminal Attack Controller
JTF	Joint Task Force
LAAR	Light Attack/Armed Reconnaissance
LAS	Light Air Support
LIC	Low Intensity Conflict

LiMA	Light-Mobility Aircraft
MD-C2	Multi-domain Command and Control
MDCOA	Most Dangerous Course of Action
MDOC	Multi-domain Operations Center
MLCOA	Most Likely Course of Action
MPU	Military Power Utilization
OAS	Offensive Air Support
ODS	Operation Desert Shield/Storm
OE	Operating Environment
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
OSS	Operational Support Squadron
OT&E	Organize, Train, and Equip
PATS	Partner and Advisory Training Squadron
PID	Positive Identification
ROMO	Range of Military Operations
SEA	Southeast Asia
SECDEF	Secretary of Defense
SIGAR	Special Inspector General for Afghanistan Reconstruction
SOS	Special Operations Squadron
SPINS	Special Instructions
TACAIR	Tactical Aircraft
TACP	Tactical Air Control Party
TAGS	Theater Air-Ground System
TOC	Tactical Operations Center
TTP	Tactics, Techniques, and Procedures
US	United States

USAF	United States Air Force
USAFWC	United States Air Force Warfare Center
UW	Unconventional Warfare
VUCA	Volatility, Uncertainty, Complexity, and Ambiguous

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## Introduction

Unless we have military policies, weapons, techniques, and tactics capable of supporting limited objectives, we cannot have an effective strategy of limited war.

—Robert Osgood, *Limited War The Challenge to American Strategy*

With the abrupt end of the Soviet Union and Warsaw Pact in the early 1990's and the tragedy of 9/11 less a little more than a decade later, the United States' (US) familiar security framework of the Cold War transitioned into an amorphous environment of warm wars, violent extremism, failed states, and a plethora of other 'lesser included' military operations.<sup>1</sup> This resulting paradigm shift in the national security environment of the twenty-first century has been recognized, but still suffers from the lack of a well-defined national (grand) strategy. Correspondingly, US military operations during this time have suffered from ill-defined objectives and end-states.<sup>2</sup> As a result, the US military—specifically, the US Air Force (USAF)—has been employed via technologically-enabled, tactically-focused, loosely-connected methods within this lower spectrum of conflict, collectively referenced as *small wars*. This monograph argues that airpower must be effectively and efficiently utilized as a major component of the so-called second grammar of small wars, just as it is abundantly used in war's first grammar of major combat operations (MCO).<sup>3</sup> More importantly, this monograph details suggestions of how the USAF can devise a cohesive, integrated operational framework for the utilization of airpower in contemporary small wars.

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<sup>1</sup> Thomas Barnett, *Pentagon's New Map: War and Peace in the Twenty-First Century* (New York: G. P. Putnam's Sons, 2005), 34, 59.

<sup>2</sup> Ibid.

<sup>3</sup> Antulio J. Echevarria, II, "American Operational Art, 1917-2008," in *The Evolution of Operational Art*, ed. John Andreas Olsen and Martin van Creveld (Oxford, UK: Oxford University Press, 2010), 137.

The US military, in general, and the USAF, in particular, are facing a growing crisis due to the stressors of a sustained high-operations tempo, budgetary shortages and fiscal uncertainty, and an evolving (or devolving) world order, which requires them to be prepared to respond to a wide variety of challenges. The Joint Operating Environment (JOE) 2035 document describes these challenges as being characterized by “contested norms,” “persistent disorder,” and a complex array of intersecting trends that highlights a changing character of war.<sup>4</sup> While preparedness for force-on-force MCO is critical, so, too, is the need to be able to succeed in smaller conflicts resulting from the volatility, uncertainty, complexity, and ambiguous (VUCA) nature of the twenty-first security environment.<sup>5</sup>

The simultaneous challenges of internal military issues and external contemporary threats require drastic actions to ensure the US military, and the USAF, has the capability to successfully respond to any given scenario. In order to address some of these challenges, this monograph first seeks to validate the claim that the particular phenomena of small wars is a core current and future demand for the US military. Next, this research shifts to the subsequent and critical question: How does the USAF transform to create more capable, comprehensive, sustainable, efficient, and effective small wars airpower.

This monograph synthesizes the concepts of small wars, airpower, and the operational level of war in order to analyze, critique and propose specific improvements to the USAF’s employment concept for small wars and its accompanying US Code Title 10 responsibilities to organize, training, and equip (OT&E) airpower forces. Through the use of a simplistic three-part model and examination of current commentaries, this monograph provides a brief overview of the concept of small wars, primarily highlighting the political and operational factors unique to these

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<sup>4</sup> Joint Chiefs of Staff, *Joint Operating Environment (JOE) 2035: The Joint Force in a Contested and Disordered World* (Washington, DC: Joint Chiefs of Staff, 2016), accessed 15 December 2016, [http://www.dtic.mil/doctrine/concepts/joe/joe\\_2035\\_july16.pdf](http://www.dtic.mil/doctrine/concepts/joe/joe_2035_july16.pdf), ii.

<sup>5</sup> Army Techniques Publication (ATP) 5-0.1, *Army Design Methodology* (Washington, DC: Department of the Army Headquarters, 2015), v.

types of violent clashes. Next, the concept of *airpower* is examined, focusing on its functions, roles, and recently published USAF strategic planning documents. These two discussions serve to emphasize the significant uniqueness of this type of war, and a basic understanding of aerial warfare, respectively.

The core argument, that the US military (and by necessity, the USAF) needs to create airpower specifically suitable for small wars, is first analyzed through a review of previous works regarding this subject, then briefly illuminated through two historical vignettes. These vignettes explore the 1990-91 Gulf War as the quintessential example of an integrated, comprehensive operational approach that possessed an effective use of airpower, albeit in a major force-on-force campaign. This success is compared and contrasted with the marginal airpower results in the small wars nature of the conflict of Vietnam. Following his presentation of the argument, this monograph provides detailed recommendations to make innovative and necessary improvements to airpower in small wars. These changes to improve the effectiveness and efficiency of airpower in small wars are postulated through updates to the USAF's employment, organization, training, and equipping (E-OT&E) for small wars.

## Understanding Small Wars and the Contemporary Security Environment

The colloquial purpose of the US military is to “fight and win the nation’s wars.”<sup>6</sup> Yet, the military is more often employed to fulfill other roles and accomplish other missions besides conducting major military campaigns and operations. Indeed, from 1915 to 2015, the US military participated in five ‘traditional war’ MCO, force-on-force engagements, but conducted more than 50 other operations that did featured the use of the armed forces, but without escalating to

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<sup>6</sup> US Army, “Organization: Who We Are,” 10 April 2017, accessed 10 April 2017, <https://www.army.mil/info/organization>.

sustained force-on-force operations.<sup>7</sup> Put another way, the US military is at least ten times more likely to conduct small wars operations than MCO; “traditional war is the paradigm, (but) gray zone conflicts are the norm.”<sup>8</sup> Carl von Clausewitz admonished national leaders to first determine “the kind of war on which they are embarking; neither mistaking it for, nor trying to turn it into, something that is alien to its nature,”<sup>9</sup> In utilizing military force in inconsistent manners and in ways that are incongruent with the political demands, the military has been robustly engaged, but it has seldom been at war.

Categorizing these “military operations other than war” has been a seemingly perpetual challenge for all participants and commentators on national security for several decades.<sup>10</sup> While the terminology used to describe these operations is vitally important, it is an even more fundamental necessity to understand the nature of these operations.

Clausewitz noted war has its own grammar and, more recently, security experts have expanded this concept to address the unique nature of military operations that do not meet the definition of traditional war.<sup>11</sup> National security expert Dr. Antulio J. Echevarria, II defines the concepts, principles, and procedures that define these other types of operations as *war’s second grammar*.<sup>12</sup> Understanding the characteristics and nature of operations within war’s second grammar is the prerequisite for devising a successful operational construct that integrates all military warfighting domains. The following section presents a model that is useful to understand this different and unique phenomenon of small wars.

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<sup>7</sup> Philip Kapusta, “The Gray Zone.” *Special Warfare* 28, no. 4 (October - December 2015): 19-25, accessed 10 April 2017, <http://www.soc.mil/swcs/SWmag/archive/SW2804/October%202015%20Special%20Warfare.pdf>, 20-21.

<sup>8</sup> Ibid.

<sup>9</sup> Carl von Clausewitz, *On War*, ed. Michael E. Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1989), 88.

<sup>10</sup> Kapusta, 20-21.

<sup>11</sup> Clausewitz, 605.

<sup>12</sup> Echevarria, 137.



## Military Power Utilization Model Overview

War is the violent expression of opposing human wills whose contest must be understood within its political context; that context is extremely complex and contains interdependent elements collectively described as *political factors*.<sup>13</sup> Next, the aggregation of concepts related to the operational level of war (e.g., operating environment, operational art and design, etc.) is referenced as *operational factors*. Lastly, *military factors* consist of force structure, personnel, equipment, and many other elements. Senior military leaders synchronize political and operational factors to formulate a general military strategy. Military planners then use operational art to assess the difference between the current operating environment (OE) and the one desired in the strategy and political guidance and most crucially, how that new state can be achieved with realistic military capabilities. The skillful combination of a reasonable strategy and quality operational art to create an integrated, comprehensive operational approach for a given conflict results in the effective employment of military power. This entire process is presented below as the **Military Power Utilization (MPU) Model**, and these specific factors will be utilized in examining the two brief case studies (see figure 1, next page).<sup>14</sup> The MPU Model applied in absence of a specific threat constitutes an operational construct for a generalized type of threat or scenario – i.e., large wars versus small wars.

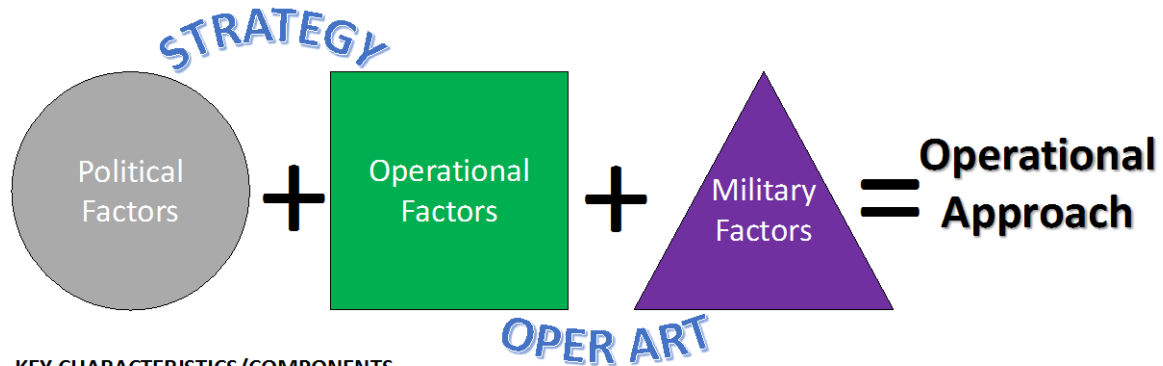
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<sup>13</sup> Air Force Doctrine Annex, *Annex 3-0: Operations and Planning*. Core Doctrine, Volume 1: *Basic Doctrine*, 4 November 2016, accessed 10 November 2016, <https://doctrine.af.mil/download.jsp?filename=3-0-Annex-OPERATIONS-PLANNING.pdf>, 16.

<sup>14</sup> The author created the Military Power Utilization Model (hereon referenced as the MPU Model) as a pictorial heuristic to facilitate understanding of how the relationship between political, operational, and military influences determine the effectiveness of the military instrument of national power.

# Military Power Utilization (MPU) Model

Effective Use of Military Force Function of:



## KEY CHARACTERISTICS/COMPONENTS

- **Political Factors:** Goal / aim, political and public will, risk, duration
- **Operational Factors:** PMESII-PT, METT-TC, center of gravity analysis
  - Political, military, economic, social, information, infrastructure, physical environment, and time
  - Mission, enemy, terrain and weather, troops and support available, time available, civil considerations
- **Military Factors:** DOTMLPF-P/I
  - Doctrine, organization, training, materials/equipment, leadership, personnel, facilities, policy/Interoperability

Figure 1. Military Power Utilization (MPU) Model Overview.

Source: Kenyatta H. Ruffin.

## MPU Model Utilized – Formation of an Operational Construct

Clausewitz said, “The influence of theoretical truths on practical life is always exerted more through critical analysis than through doctrine.”<sup>15</sup> War is an intricate, human endeavor that can be analyzed, synthesized, and studied *ad nauseam* without an appreciable increase in understanding nor an improvement in its conduct. The phenomena of small wars, as well as grasping the nuances of operational-level employment of military force increases its perplexity. The abundance of tools and models in current doctrine were formulated with a focus on major combat operations and must be appropriately contextualized for applicability in small wars. While perfectly suitable for the study of major war, the MPU Model is particularly useful for inquiries of small wars.

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<sup>15</sup> Clausewitz, 156.

The MPU Model first and foremost starts with the political nature of war, appropriately defining its character and shape. Political outcomes of war are broadly viewed in terms of ‘total victory’ or something less than that. It is in the latter (i.e., a war of limited aims) that Political Factors becomes the most shifting variable within the model and the aspect in which success in effective employment of military force hinges on the most.<sup>16</sup> For example, military planners should not assess political factors as a circle when it is actually an oval. In other words, the nuanced differences of mostly similar situations are critically important (see figure 2). The operational factors present the most ascertainable, though intricate variables in this model. The items for assessment are numerous, but once measured (or more appropriately, continually assessed), their shape is known and will not radically change; e.g., a desert terrain will not suddenly transform to mountainous, nor will an enemy with a drastically inferior (or non-existent) air force suddenly possess modern equipment. The MPU Model then illuminates a focus on the most flexible and changeable component in the effective use of military force: the actual military itself. Granted, transforming the military force may not be achievable within a short period, but this factor is definitely more adaptable than political factors and does not have to be simply accepted, as are the actual operational factors. Thus, this entire monograph finds its *raison d’être* in the narrowly targeted goal of influencing the shaping of airpower military factors within the political and operational context of small wars.

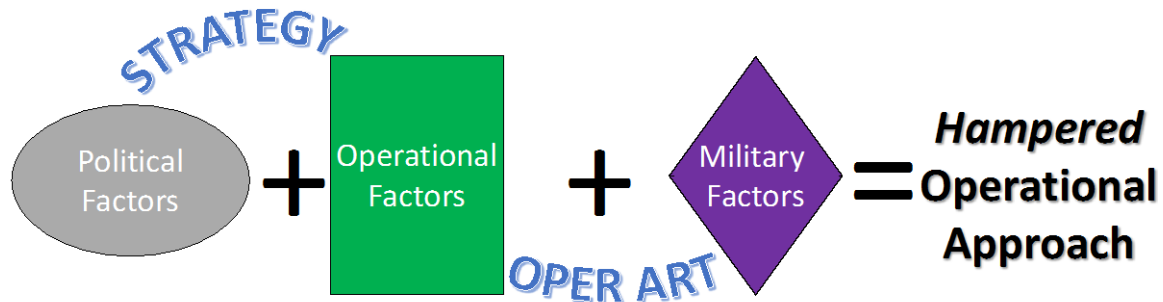
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<sup>16</sup> Clausewitz, 625.

# Military Power Utilization (MPU) Model

## Incongruent Political Factors

Congruent Operational & Military Factors



### KEY CHARACTERISTICS/COMPONENTS

- **Political Factors:** Goal / aim, political and public will, risk, duration
- **Operational Factors:** PMESII-PT, METT-TC, center of gravity analysis
  - Political, military, economic, social, information, infrastructure, physical environment, and time
  - Mission, enemy, terrain and weather, troops and support available, time available, civil considerations
- **Military Factors:** DOTMLPF-P/I
  - Doctrine, organization, training, materials/equipment, leadership, personnel, facilities, policy/Interoperability

Figure 2. MPU Model incongruence.

*Source:* Kenyatta H. Ruffin.

Figure 2 (MPU Model incongruence) presents how misunderstandings within the MPU Model create inefficiencies and prevent effectiveness in the use of military force, especially when the strategy derived from the interplay between the political factors and operational factors does not match the mission/task required by the OE (e.g., disaster relief view of a counterterrorism mission). The political nature of the war is always the dependent variable in the calculation of military force, and is the lens the subsequent factors must be viewed through. The determination of a successful strategy is the first and highest level of synthesis that must occur for the effective use of military force. This will be specific and unique for every conflict, but the relationship between the operational and military factors is something that can often be married ahead of time.

Similar types of wars and threats will share common characteristics, affording a prediction of the required military operations and actions suitable for each type of war. When this generalized, conceptual theory for employment against various types of threats exists, it is often captured in doctrine and affects most other aspects of the Military Factors. This templated design

for military employment can be referenced as an operational construct. *An operational construct provides a basic plan for the employment of military forces in likely future conflicts without knowing the most explicit details of the OE and without the knowledge of the exact political factors.* While the US military is certainly adept at and capable of “fitting a square peg into a round hole,” the failure to have a functional operational construct increases the risk of a catastrophe because it allows an attempt to employ a hammer on something that is neither a square peg, nor a round hole. Sound operational constructs increase the likelihood of the effective use of military force by providing a dependable framework for operational art to occur. A clear, common operational construct affords military actions to be integrated in planning and synchronized in execution, leading to the achievement of objectives that directly contribute to the desired strategic end state.<sup>17</sup>

## Words Matter – Limited War and Associated Terms

The political factors introduced in the MPU Model provide the boundaries and scope of the war. The term *Limited War* was popularized in the beginning of the Cold War by Robert Osgood to highlight the challenges to American strategy due to the political desire to restrain and “rationalize” the otherwise idealistic and unrestricted use of force – i.e., not to use nuclear weapons unless needed for national survival.<sup>18</sup> Osgood provided a focused and relevant treatise on the Clausewitzian theme that war rarely reaches its absolute form, explaining that nations have refrained from employment of too large of a force, on too large of a scale, or for too ambitious of objectives, in order to avoid unlimited war.<sup>19</sup> This is an exact summation of

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<sup>17</sup> The *AirLand Battle* (ALB) concept and the subsequent Gulf War are the perfect example of a solid operational construct, leading to a brilliant operational approach that enabled military actions to achieve its political goals. The ALB/Gulf War relationship will be explored in greater detail later in this monograph.

<sup>18</sup> Robert Osgood, *Limited War: The Challenge to American Strategy* (Chicago: Chicago University Press, 1957), 17.

<sup>19</sup> Clausewitz, 582-83; Osgood, 124.

Clausewitz's declaration that "the less intense the (political) motives" of the war, the more "the conflict will seem increasingly political in character."<sup>20</sup>

Thus, planning for and conducting limited war is fundamentally different from unlimited war. This monograph argues that MCO are more closely linked to unlimited war as the political environment which created the situation remains relatively constant throughout the conflict and its termination is primarily achieved through military means. Conversely, in limited war, military operations must always be validated by political leaders as the political factors are much more dynamic and have the capability to change rapidly. Furthermore, obtainment of military objectives is not likely to resolve the conflict without accompanying political, economic, and socio-cultural changes.<sup>21</sup>

The concept of limited war provides a foundation to understand war's second grammar, but full comprehension requires a more practical application. Joint Doctrine defines a range of military operations (ROMO), which can be grouped into three distinct categories, essentially reflecting its combat intensity (see figure 3, next page).<sup>22</sup> As indicated on the Y-axis, the recurring quality that reduces a military operation to the low aspect of conflict revolves around the minimal political will and objectives of the operation. Resultantly, these operations are typically limited in scale/size, acceptable risk, duration, and normally feature a degree of combat that is less than that of MCO and campaigns. Viewed in totality, the qualities of being on the *low-intensity* end and at the bottom of the *conflict continuum* gave rise to the term low-intensity conflict (LIC).

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<sup>20</sup> Clausewitz, 88.

<sup>21</sup> Robert R Sterling, Jr., "Desert Storm: The War the Coalition Almost Lost" (Paper, Naval War College, Newport, RI, 1993), 9, accessed 15 December 2016, <http://www.dtic.mil/dtic/tr/fulltext/u2/a264430.pdf>.

<sup>22</sup> It is imperative to understand that ROMO is a continuum rather than distinct, divided activities, with higher levels usually including aspects of lower levels, and with the ability of lower levels to quickly escalate to higher levels.

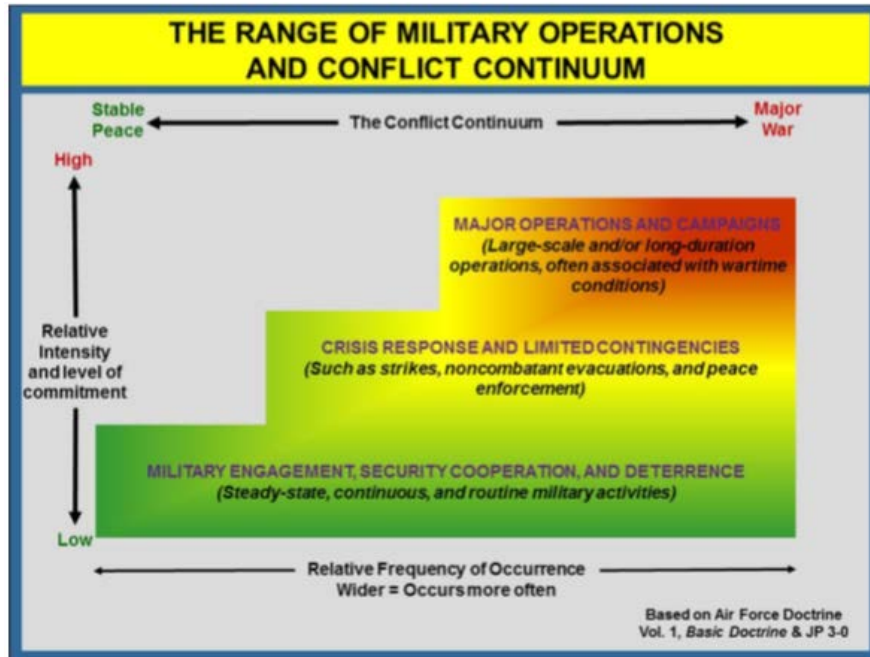


Figure 3. Range of military operations and conflict continuum.

Source: Air Force Doctrine Annex 3-0, *Operations and Planning*, 4 November 2016, accessed 10 November 2016, <https://doctrine.af.mil/download.jsp?filename=3-0-Annex-OPERATIONS-PLANNING.pdf>, 29.

While hard to find in current doctrinal publications, a good definition of LIC was espoused by a military officer in the 1980s, who stated that it “refers to the range of activities and operations on the lower end of the conflict spectrum involving the use of military or a variety of semi-military forces (both combat and noncombat) on the part of the intervening power to influence and compel the adversary to accept a political-military condition.”<sup>23</sup> An evolutionary and more contemporary term found in Joint Doctrine is “irregular warfare,” defined as “a violent struggle among state and non-state actors for legitimacy and influence over the relevant population(s).”<sup>24</sup> IW is said to consist of five key activities and mission types: counterinsurgency (COIN), counterterrorism (CT), foreign internal defense (FID), stability operations, and

<sup>23</sup> David J. Dean, *AF Role in Low-Intensity Conflict* (Maxwell AFB, AL: Air University Press, 1986), 2.

<sup>24</sup> Joint Publication (JP) 1-02, *DoD Dictionary of Military and Associated Terms* (Washington, DC: Government Printing Office, 2017), 119.

unconventional warfare (UW).<sup>25</sup> Although not defined in JP 1-02, *Department of Defense Dictionary of Military and Associated Terms*, or JP 3-0, *Joint Operations*, a concept gaining acceptance is that of “hybrid warfare” or “gray-zone conflicts” which features the operational fusion of conventional and irregular capabilities.<sup>26</sup> Defined by “any adversary that simultaneously employs a tailored mix of conventional weapons, irregular tactics, terrorism, and criminal behavior in the same time and battlespace to obtain their political objectives,” hybrid warfare highlights the Clausewitzian dictum that war is an extension of politics.<sup>27</sup>

## Concepts Matter More – What Small Wars Mean

All of the previous terms are useful in beginning to understand war’s second grammar, though many other related terms exist. While providing a precise definition of this type of conflict has the potential to simplify and standardize the current lack of clarity within the defense community, it is the need to establish new strategies and efforts across the interrelated totality of the doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policies (DOTMLPF-P) spectrum that is much more compelling.<sup>28</sup> The entirety of the challenges in this type of conflict extends beyond the scope of military power to include all diplomatic, information, military, economic, financial, intelligence and law enforcement (DIMEFIL) elements, governmental and non-governmental entities, nation-states, and other actors. Thus,

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<sup>25</sup> Department of Defense, *Irregular Warfare: Countering Irregular Threats Joint Operating Concept* (Washington, DC: Government Printing Office, 2010), 5, accessed 15 December 2016, [http://www.dtic.mil/doctrine/concepts/joint\\_concepts/joc\\_iw\\_v2.pdf](http://www.dtic.mil/doctrine/concepts/joint_concepts/joc_iw_v2.pdf).

<sup>26</sup> Frank G. Hoffman, “Hybrid Warfare and Challenges,” *Joint Force Quarterly*, no. 52 (1st Quarter 2009): 36, accessed 14 November 2016, [www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA516871](http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA516871).

<sup>27</sup> Michael J. Mazarr, *Mastering the Gray Zone: Understanding a Changing Era of Conflict* (Carlisle, PA: Strategic Studies Institute, 2015), 44-45, accessed 2 November 2016, <http://www.strategicstudiesinstitute.army.mil/pdffiles/PUB1303.pdf>.

<sup>28</sup> US Army Irregular Warfare Center, “Irregular Warfare: A Clear Picture of a Fuzzy Objective,” *Small Wars Journal*, 22 October 2013, accessed 18 February 2017, <http://smallwarsjournal.com/jrnl/art/irregular-warfare-a-clear-picture-of-a-fuzzy-objective>.



developing the defense-specific capacity to counter these threats has been identified as one of the most pressing and relevant demands of the twenty-first century.<sup>29</sup>

After sifting through the lexicon related to war's second grammar, this monograph argues for the term *small wars* to refer to this militaristic, violent clash of wills within this realm of human interaction. *Small wars* is a useful term because it is the essence of all of these other terms, and therefore possesses a comprehensive meaning, allowing the other, more-nuanced terms to apply specifically to precise types of small wars, vice referring to the general concept of 'not force-on-force' battles. Using the term *small wars* also removes any ambiguity about the intensity, violence, or political dominance of the situation.

## The Twenty-first Century Threat

As the military consistently confronts nontraditional enemies and responds to asymmetric challenges, the need to develop a coherent operational construct centered around more than just kinetic force continues to be illuminated as a lesson to be learned.<sup>30</sup> A common framework for assessing threats is to propose the enemy's most likely and most dangerous course of action (MLCOA and MDCOA, respectively). While it is certainly true, as stated by the CSAF, that the United States is not adept at correctly guessing which war it will fight next, it is reasonable to suspect that small wars will continue to be a part of US military operations for at least the next fifteen years.<sup>31</sup> The JOE 2035 proclaims that it is only in 'worst case' and extreme scenarios that the Joint Force would be required to conduct major sustained combat operations to counter threats

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<sup>29</sup> Nathan P. Frier et al., *Outplayed: Regaining Strategic Initiative in the Gray Zone* (Carlisle Barracks, PA: United States Army War College Press, 2010), 4.

<sup>30</sup> Rosa Brooks, *How Everything Became War and the Military Became Everything: Tales from the Pentagon* (New York: Simon and Schuster, 2016), 41; Anthony D. McIvor, *Rethinking the Principles of War* (Annapolis, MD: Naval Institute Press, 2005), 162.

<sup>31</sup> US Air Force Chief of Staff, *CSAF Focus Area: Strengthening Joint Leaders and Teams* (Washington, DC: Government Printing Office, October 2016), 3, accessed 15 December 2016, <http://www.af.mil/Portals/1/documents/csaf/letters/16%2010%2013%20Focus%20Area%20II.pdf?ver=2016-10-13-105649-460&timestamp=1476371621707>.

to vital national security interests; this represents the MDCOA<sup>32</sup>. Similarly, according to the 2015 National Military Strategy, the probability of United States' participation in an interstate war (i.e., MDCOA) is low, but the immediate threat from irregular forces and methods found in "hybrid conflict" (i.e., MLCOA) is likely to continue for the foreseeable future.<sup>33</sup> Thus, without any degradation to the importance of threats from a MDCOA scenario, it is clear that small wars constitute the MLCOA. While the US military, and the USAF more specifically, absolutely must be prepared to win in the MDCOA scenario, they should also be prepared to dominate the threat posed by the MLCOA. Unfortunately, internal budgetary and force structure struggles have prevented US success in this arena and potentially pose an even more catastrophic danger.

Former Chairman of the Joint Chiefs of Staff Admiral Michael Mullen stated that 'debt' is the single greatest threat to US national security; this position was more powerfully reaffirmed in May 2016 by six former Secretaries of Defense, State, and National Security Advisors.<sup>34</sup> The military problems from and causes of this issue are indeed complex, and the resolutions are even more difficult as modernization and current operational requirements compete for limited resources. Cost-saving options must be found that balance the requirements of current demands, the MDCOA, and the MLCOA threats. Thus, finding creative, cost-reducing methods to OT&E military forces is an imperative, especially within the USAF.

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<sup>32</sup> Joint Chiefs of Staff, *JOE 2035*, 49.

<sup>33</sup> Joint Chiefs of Staff, *National Military Strategy* (Washington, DC: Government Printing Office, 2015), 4, accessed 11 November 2016, [http://www.jcs.mil/Portals/36/Documents/Publications/National\\_Military\\_Strategy\\_2015.pdf](http://www.jcs.mil/Portals/36/Documents/Publications/National_Military_Strategy_2015.pdf).

<sup>34</sup> Kristina Wong, "National Security Experts Sound Alarm on Long-Term Debt," *The Hill*, 10 May 2016, accessed 10 March 2017, <http://thehill.com/policy/defense/279320-prominent-group-says-long-term-debt-the-single-greatest-threat-to-us-national>.

## Understanding Airpower

The original air force advocate General Billy Mitchell defined airpower as “the ability to do something in the air.”<sup>35</sup> Unfortunately, this perception persists today as many do not possess a thorough understanding of airpower theory or strategy, thus preventing its effective and efficient employment. More importantly, and perhaps due to a failing of modern airpower advocates, the contextual application of airpower is extremely important.<sup>36</sup> Not surprisingly, the role, functions, and missions of airpower in small wars are not the same as that in MCO. This section first provides a brief review of airpower in general and ends with an analysis of its missions; it is in this last element of specific roles and functions that the relevance to small wars is most important.

### Airpower Defined

The unique and extraordinary aspect of airpower is that it is the only domain that is significantly utilized by all four military branches, so it is honestly *Joint*, with proponents throughout the Department of Defense (DoD). However, it is the USAF that is primarily responsible for leading the development of airpower doctrine, tactics, techniques, and procedures (TTPs). Thus, throughout this paper there will be many references to the USAF with the implication that USAF activities will apply to the broader application of airpower across the Joint and coalition community. The USAF currently defines airpower as “the ability to project military power or influence through the control and exploitation of air, space, and cyberspace to achieve strategic, operational, or tactical objectives.”<sup>37</sup> A review of airpower’s ‘Five W’s’ provides a greater understanding of the key attributes and functions of airpower.

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<sup>35</sup> William Mitchell, “Winged Defense,” in *Roots of Strategy: Book 4*, ed. David Jablonsk (Mechanicsburg, PA: Stackpole Books, 1999), 425.

<sup>36</sup> Jeffrey J. Smith, “Beyond the Horizon: Developing Future Airpower Strategy,” *Strategic Studies Quarterly* 8, no. 2 (Summer 2014): 74.

<sup>37</sup> US Air Force, *Volume 1, Basic Doctrine*, 25.

## Airpower - Who and What

This definition begins by asking the question that gets to the essence of armed conflict and highlights a key factor in the discussion of small wars: military power is used against what and its influence is imparted on whom? Thus, the very question of what is the military for—not its function or what does it do, but more fundamentally what is its purpose—is illuminated by the definition of airpower and is consistent with the Clausewitzian notion that war is an act of force to compel the enemy to do our will.<sup>38</sup> More recently, the scholar and airpower theorist Robert Pape suggests that the contemporary primary *raison d'être* of the military is coercion, and he defines four specific airpower strategies to achieve this effect: punishment, risk, decapitation, and denial (see table 1). In substituting the word ‘and’ in place of ‘or’ in the definition of airpower, Pape postulates that force is used against specific physical targets (what) in order to influence a certain demographic (who) to respond in a certain manner that will ultimately compel them to acquiesce to the sought after political aims.

Table 1. Overview of coercive airpower strategies

Type of Coercive Airpower Strategy	Primary Target	Intended Effect	Intended Outcome
Punishment	Enemy civilians	Inflict intolerable physical, morale, and economic costs of sustaining resistance	Civilian population demands that political leaders capitulate so they do not continue to suffer
Risk	Enemy civilians	Same as punishment, but applied in a gradual intensification	Enemy political leadership recognizes the futility of continued resistance (otherwise more punishment)
Decapitation	Enemy political and military leaders	Unable to command and control military forces	Military forces more easily able to achieve tactical and operational objectives
Denial	Enemy political and military leaders	Destruction of military capability	Inability to offer any significant military opposition

*Source:* Angelique L. Faulise, “Two Theories on the Use of Airpower: Warden vs. Pape” (Research Report. National War College, Fort McNair, VA, 2003), 7.

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<sup>38</sup> Clausewitz, 75.

Pape makes the importance of this airpower theory to small wars clear by asserting that coercion strategies are employed to “achieve political goals on the cheap” versus the more costly and extensive strategy of all-out destruction of an enemy’s military capability to resist.<sup>39</sup> This suggests that an easier and more expedient strategy is more favorable than one that requires more military forces, time, and political investment to achieve the same goals; this is especially true in small wars where the willingness to endure losses and/or have a protracted engagement is low.

### Airpower - When and Where

The phrase ‘control and exploitation’ imply a degree of dominance and freedom of maneuver that Americans have come to regard as a given and assumed ‘American birthright’.<sup>40</sup> Indeed, 15 April 1953 was the last time a US ground troop was killed by enemy air action and it has been over 25 years since gaining and maintaining air superiority was a significant challenge.<sup>41</sup> This competence in *air* superiority has expanded to include the control and exploitation of the three separate, unique, but interrelated domains of air, space, and cyberspace. Thus, the term ‘airpower’ *always* really means airpower, spacepower, and cyberpower. In small wars, the US military expects that it will achieve superiority, if not supremacy, in all three of these domains, even if some adversaries possess a marginal capability to challenge US dominance. The weight of effort required and the degree of difficulty for airpower to achieve its implicit goal in small wars will vary, but by definition, it will always be less than that of MCO.

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<sup>39</sup> Robert A. Pape, *Bombing to Win: Air Power and Coercion in War* (New York: Cornell University Press, 1996), 13.

<sup>40</sup> Department of Defense, “Briefing by Secretary James and Gen Goldfein on the State of the Air Force,” 10 August 2016, accessed 10 December 2016, <http://www.defense.gov/News/Transcripts/Transcript-View/Article/911083/departement-of-defense-press-briefing-by-secretary-james-and-gen-goldfein-on-the>.

<sup>41</sup> Peter Grier, “April 15, 1953.” *Air Force Magazine* (June 2011): 54- 57, accessed 4 February 2017, <http://www.airforcemag.com/MagazineArchive/Documents/2011/June%202011/0611april.pdf>, 54.

## Airpower - Why

Maybe the most important aspect of the definition and crucial capability of airpower is its capacity to achieve a variety of objectives, independent of or in concert with other forms of military power (i.e., land power or sea power). An original and benchmark aspect of airpower theory is the notion that it can directly achieve strategic objectives while bypassing sequential tactical and operational objectives against fielded forces. Ultimately, as will be explored in the case studies, the issue of the decisiveness of airpower becomes a controversial topic, as it becomes undeniable that airpower can be utilized at all three levels of war; whether or not that is enough to win a war is the crux of the issue and remains an important point of discussion in relation to small wars.

## Airpower's Sixth W – How: The Tenets of Airpower

A more pragmatic understanding of airpower is provided by the “fundamental guiding truths” regarding airpower employment.<sup>42</sup> Originally, airpower theorists focused on the airpower attributes of “access, speed, and strategic strike” to develop basic principles and requirements for airpower employment (e.g., command and control, organization, etc.).<sup>43</sup> These axioms of key attributes and best practices were eventually compiled in USAF doctrine to form what is now known as the Tenets of Airpower (table 2, next page). Just as the Principles of Joint Operations provide the basic instructions for the employment of military force in general, these tenets assert guidance specifically for airpower employment.<sup>44</sup>

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<sup>42</sup> US Air Force, *Volume 1, Basic Doctrine*, 65.

<sup>43</sup> Smith, 76.

<sup>44</sup> US Air Force, *Volume 1, Basic Doctrine*, 65.

Table 2. Tenets of airpower

TENET OF AIRPOWER	DESCRIPTION
Centralized Control and Decentralized Execution	The central and paramount philosophy of airpower employment, command and control; it enables mass and economy of force; airpower should always be commanded by an Airman
Flexibility and Versatility	Stems from centralized control; airpower has unique capability to simultaneously: 1. exploit mass and maneuver 2. operate at multiple levels of war
Synergistic Effects	Appropriate, coordinated, and synchronized airpower operations in multiple domains produces outcomes greater than the sum of the individual actions
Persistence	Airpower's range and speed allow for continuous operations across a broad spectrum of targets, creating an asymmetric temporal advantage
Concentration	Enabled by most other tenets, airpower can be employed <i>en masse</i> at the decisive time and location; airpower should not be weakened through dispersion of its limited assets
Priority	Limited airpower assets must be appropriately assigned as demands for airpower will likely exceed available resources
Balance	Airpower effectiveness and efficiency is determined by the correct application of these tenets and the principles of joint operations

Source: Adapted from US Air Force, *Volume 1, Basic Doctrine*, 65 -75.

These interrelated tenets are of significant importance when examining airpower's effectiveness in small wars. These tenets, combined with the legal statutes that created and defined the roles of the USAF, provide a practical explanation of key airpower functions.

## Air Force Roles and Missions

The National Security Act of 1947 established the USAF and was accompanied by Executive Order 9877 which defined seven specific tasks for the USAF that were simplified to five primary missions (see figure 4).<sup>45</sup> Though the tactics and equipment for accomplishing these missions have changed, these fundamental airpower missions remain the hallmark of the USAF today.<sup>46</sup> Anticipating the future, the USAF has conceptualized and defined its core roles and

<sup>45</sup> The American Presidency Project, "159-Executive Order 9877, Functions of the Armed Forces," 26 July 1947, accessed 14 November 2016, <http://www.presidency.ucsb.edu/ws/?pid=12717>.

<sup>46</sup> US Air Force, *Global Vigilance, Global Reach, Global Power for America: The World's Greatest Air Force* (Washington, DC: Government Printing Office, 2013), accessed 5 December 2016, [http://www.af.mil/Portals/1/documents/af%20events/2015/newGV\\_GR\\_GP\\_PRINT.pdf](http://www.af.mil/Portals/1/documents/af%20events/2015/newGV_GR_GP_PRINT.pdf), 1.

missions of 2035 in the “Air Force Future Operating Concept” (AFFOC) as slight adaptations of the past and present roles.<sup>47</sup> The evolution of these five missions is sufficient as a conceptual tool, but lacks any true significance without making fundamental planning, programming, budgeting, and execution (PPBE) changes that substantially reshape USAF OT&E. Furthermore, these changes in missions are set for 20 years into the future, but as the CSAF testified to Congress, “the future is upon us now,” and the challenge to face is that of current operations and the enemy MLCOA of IW.<sup>48</sup>

<b>1947</b>	<b>Today</b>	<b>Future</b>
Air Superiority	Air & Space Superiority	Adaptive Domain Control
Air Reconnaissance	Global Integrated ISR	Global Integrated ISR
Airlift Mobility	Rapid Global Mobility	Rapid Global Mobility
Strategic Air Force	Global Strike	Global Precision Strike
Coordination of Air Defense	Command and Control	Multi-domain Command and Control

Figure 4. Evolution of the Air Force core missions.

*Source:* US Air Force, *Air Force Future Operating Concept: A View of the Air Force in 2035* (Washington, DC: Government Printing Office, September 2015), accessed 15 September 2016, <http://www.af.mil/Portals/1/images/airpower/AFFOC.pdf>, 12.

## Understanding the Need for Small Wars Airpower

The USAF currently finds itself at the apex of each of the twenty-first century military challenges in that its capabilities are foundational to winning in the MDCOA scenario, and also critical to the success of operations against MLCOA threats, it has the largest share of the proposed DoD total budget, and it is in dire need of revitalization as it has the smallest force size and oldest equipment since its inception.<sup>49</sup> The complexity of simultaneously addressing these

<sup>47</sup> US Air Force, *Air Force Future Operating Concept: A View of the Air Force in 2035 (AFFOC)* (Washington, DC: Government Printing Office, September 2015), accessed 15 September 2016, <http://www.af.mil/Portals/1/images/airpower/AFFOC.pdf>, 2.

<sup>48</sup> Department of the Air Force, Presentation to the Committee on Appropriations, Subcommittee on Defense, *Fiscal Year 2017 Air Force Posture Statement*, February 2016, accessed 15 December 2016, [http://www.af.mil/Portals/1/documents/airpower/FY16\\_AF\\_PostureStatement\\_FINALversion2-2.pdf](http://www.af.mil/Portals/1/documents/airpower/FY16_AF_PostureStatement_FINALversion2-2.pdf), 3.

<sup>49</sup> Office of the Under Secretary of Defense (Comptroller) Chief Financial Officer, *Overview United States Department of Defense Fiscal Year 2017 Budget Request* (Washington, DC: Government Printing Office, 2016), [http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2017/FY2017\\_Budget\\_Request\\_Overview\\_Book.pdf](http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2017/FY2017_Budget_Request_Overview_Book.pdf); Mackenzie Eaglen, “Is America’s Air Force Dying,” The



four threats presents an enormous challenge for the USAF, but also offers an incredible opportunity, if the USAF is willing to examine all attributes of DOTMLPF-P to make American airpower as operationally effective and efficient as possible.

## America's Two Air Forces

According to a RAND study, “The challenge for airpower is less technical than financial, and it is less financial than institutional: if the institutional Air Force makes up its mind to pursue such independent capabilities for airpower...the resources will be found. And if the resources are found, even in an era of sharply constrained budgets, the technical problems can be solved.”<sup>50</sup> For nearly 50 years, the USAF has often claimed to have a ‘high-low mix’ of high-cost/high-capability platforms supplemented with many lower-cost/ lower-capability platforms; this plan is still espoused as valid and essential today as defined in the AFFOC’s characteristics of operational agility and balance.<sup>51</sup> Yet, in reality, this notion is nearly laughable when analyzing current costs of key USAF air-domain capabilities.

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National Interest, 7 May 2014, accessed 10 October 2016, <http://nationalinterest.org/feature/americas-air-force-dying-10391>.

<sup>50</sup> Carl H. Builder, and Theodore W. Karasik, *Organizing, Training, and Equipping the Air Force for Crises and Lesser Conflicts* (Santa Monica, CA: RAND Corporation, 1995), xvii.

<sup>51</sup> AFFOC, 10.

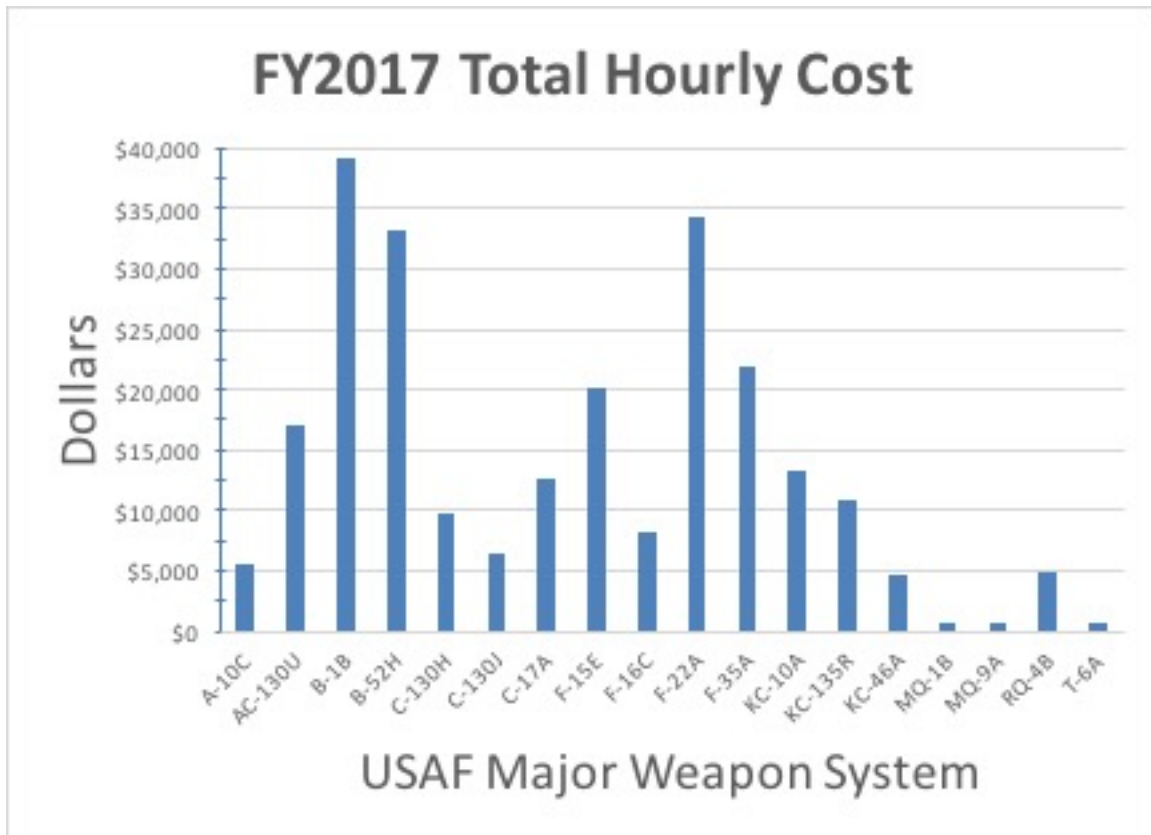


Figure 5. USAF high-low mix operating costs.

*Source:* Derived from Office of the Under Secretary of Defense (Comptroller). “FY 2017 DoD Fixed Wing and Helicopter Reimbursement Rates,” 18 October 2016. Accessed 25 March 2017. [http://comptroller.defense.gov/Portals/45/documents/rates/fy2017/2017\\_f\\_h.pdf](http://comptroller.defense.gov/Portals/45/documents/rates/fy2017/2017_f_h.pdf). *Note:* ‘T-6A’ included as reference for a Light Attack/Armed Reconnaissance capability discussed in the recommendations section of this monograph.

Figure 5 makes it abundantly clear that there is very little *low* in the mix when it comes to costs of key USAF platforms. The postulated high-low mix also claims to have an appropriate balance in capability; the specific details of various platforms is not needed to evaluate these capabilities, but rather just an understanding of different general characteristics, especially in the context of the vastly different threats of the MDCOA and MLCOA.

The MDCOA consists primarily of an anti-access/area denial (A2/AD) environment which asserts that future opponents will more vigorously contest the battlespace than recent

operations.<sup>52</sup> This environment requires stealth, survivability, stand-off weapons, and many other high-tech factors. Conversely, as mentioned in hybrid warfare theories, the MLCOA environment may feature some of the attributes of MDCOA threats, but it predominately resides on the low end of the threat spectrum. Therefore, while there is some overlapping required capability features in both scenarios (e.g., data link and precision weapons), it is undeniable that not all high end technical capabilities are required in small wars.

In the critical opinion piece, “America’s Two Air Forces,” a USAF officer argues that the USAF cannot adequately, nor economically, meet the vast twenty-first century security environment with a unitary structure and operational framework.<sup>53</sup> The capabilities required of airpower in small wars is dramatically different than those of near-peer, force-on-force battles. Table 3 summarizes the different requirements of these two threat environments and the next section highlights how these different capabilities should be utilized within the context of small wars—if the USAF is institutionally willing to make that change.

Table 3. Airpower high-low mix attributes and capabilities

MLCOA: Small War Airpower (Appropriate USAF aircraft capability)	MDCOA: Near-Peer Airpower (Appropriate USAF aircraft capability)
Tactical	Strategic
Persuade	Deter
Persistence	Long Range
Stealth Effects	Stealth Technology
Dynamic Precision	Static Precision
Low Tech	High Tech
Slow	Fast
A-10 / Predator / Reaper	B-2 / F-22 / F-35
Decentralized Control	Centralized Control

Source: Adapted from Robert Spalding, “America’s Two Air Forces,” *Air and Space Power Journal* 22, no. 2 (Summer 2009), accessed 21 October 2016, <http://www.au.af.mil/au/afri/aspj/airchronicles/apj/apj09/sum09/spalding.html>.

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<sup>52</sup> AFFOC, 10.

<sup>53</sup> Robert Spalding, “America’s Two Air Forces,” *Air and Space Power Journal* 22, no. 2 (Summer 2009), accessed 21 October 2016, <http://www.au.af.mil/au/afri/aspj/airchronicles/apj/apj09/sum09/spalding.html>.

## Fundamental Culture Change and Paradigm Shift Defined

This monograph is by no means the first to recommend significant, all-encompassing, fundamental cultural and operational changes to the USAF. Indeed, the USAF itself was born out of challenging the totality of the dogmatic beliefs and values that formed a land-centric paradigm of war. However, after over 15 straight years of being engaged in small wars and facing the challenges of being the “oldest, smallest, and least ready in its history,” this monograph argues that the USAF is backed into a corner, poised for a paradigm shift, due to the reality that previous methods, cultural values, and actions failed to produce the necessary institutional improvements to avoid the impending catastrophe of mission failure.<sup>54</sup> When faced with a crisis such as this, organizations either attempt to overcome and adapt via minimal modifications to diffuse the conflict (i.e., stay the course) or they view the situation as a crisis not solvable by current values, norms, and processes, thereby creating a true paradigm shift.<sup>55</sup> If there is any doubt that the USAF is in need of a paradigm shift, again one only need reference the CSAF’s comments: “Make no mistake, this is a quiet crisis that will almost certainly get worse before it gets better.”<sup>56</sup>

Therefore, it seems that the time is now to create a fundamental cultural change in the USAF, from one prioritizing MCO at the expense of other tasks, to one that values small wars mission sets and puts it on an equal footing with tasks such as air superiority, nuclear surety, space control, and the like. Multiple authors have argued for the overwhelming need to increase the efficiency and effectiveness of airpower in small wars by overhauling the way airpower is

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<sup>54</sup> Senator John McCain, *Restoring American Power*, White Paper, 16 January 2017, accessed 2 February 2017, [https://www.mccain.senate.gov/public/\\_cache/files/25bff0ec-481e-466a-843f-68ba5619e6d8/restoring-american-power-7.pdf](https://www.mccain.senate.gov/public/_cache/files/25bff0ec-481e-466a-843f-68ba5619e6d8/restoring-american-power-7.pdf), 12.

<sup>55</sup> Natalie W. Crawford, and Chung-In Moon, *Emerging Threats, Force Structures, and the Role of Air Power in Korea* (Santa Monica, CA: RAND Corporation, 2000), 148-49, accessed 2 February 2017, [https://www.rand.org/content/dam/rand/pubs/conf\\_proceedings/CF152/CF152.chap6.pdf](https://www.rand.org/content/dam/rand/pubs/conf_proceedings/CF152/CF152.chap6.pdf).

<sup>56</sup> Deborah Lee James, and Gen David Goldfein, USAF, “The US Air Force is Short 700 Fighter Pilots: Here’s Our Plan to Fix That,” *Defense One*, 14 July 2016, accessed 10 December 2016, <http://www.defenseone.com/ideas/2016/07/us-air-force-short-700-fighter-pilots-our-plan/129907/>.

planned, employed, and assessed in the twenty-first century security environment. Two studies from the RAND Corporation's *Project Air Force* division provided a detailed review of the modern airpower/groundpower relationship, while a third illuminates the broader challenges, capabilities, and investments required for twenty-first century threats.<sup>57</sup> Furthermore, table 4 (next page) summarizes the vastly different set of airpower military factors required to ensure congruency and efficacy with the political and operational factors of small wars.

The concepts from the RAND reports and from table 4 forms the foundation for recommendations later proposed in this monograph; the recommendations will detail exactly how the USAF can institute improvements, expanding on the previous works which presented what should be done. This monograph seeks to 'advance the ball one more yard' in creating the radical paradigm shift and complies with the guidance of contemporary airpower theorist Peter Faber:

By comparing and contrasting the self-limiting taxonomies developed by each thinker or school of thought, current and future air planners might become more self-conscious about how they use airpower. They also might free themselves from groupthink and the ill-considered preference for a single theory as the blueprint for success. Such steps are important, since in an era of increasingly limited budgets "the kind of paradigms we search out, the way we put them together, and the ambitions we nurture for their powers" will become increasingly important (emphasis in original).<sup>58</sup>

It is a flawed notion that the US armed forces can perform generally *more complex* stability operations, COIN, IW, and other small wars missions just because it can execute the generally *more dangerous* MCO missions is a falsehood that should be recognized; or more pointedly, "preparation for conventional warfare (is) inadequate for some other military

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<sup>57</sup> David C. Gompert and John Gordon, IV, *War by Other Means: Building Complete and Balanced Capabilities for Counterinsurgency* (Santa Monica, CA: RAND Corporation, 2008), v; see also Bruce R. Pirnie et al., *Beyond Close Air Support: Forging a New Air-Ground Partnership* (Santa Monica, CA: RAND Corporation, 2005); David E. Johnson, *Learning Large Lessons: The Evolving Roles of Ground Power and Air Power in the Post-Cold War Era* (Santa Monica, CA: RAND Corporation, 2007).

<sup>58</sup> Peter Faber, USAF, "Competing Theories of Airpower: A Language for Analysis," *Aerospace Power Chronicles*, accessed 10 December 2016, <http://www.au.af.mil/au/awc/awcgate/au/faber.htm>.

challenges.”<sup>59</sup> This reality is highlighted in the following section that provides an historical comparison to highlight the inadequacy of airpower due to the nature of small wars and its effectiveness when utilized within a suitable scenario.

Table 4. Summary of key recommendations for improving small wars airpower

Airpower in Small Wars	Airpower...New COIN Era	Courses... for Enhancing USAF IW Capabilities
1. A comprehensive strategy is essential	Make COIN an institutional priority	Create permanent, high-level USAF IW organization
2. Support role of airpower (e.g., ISR, mobility, etc.) is usually the most important and effective mission in a guerrilla war	Create Organizations and Processes to Oversee USAF Counterinsurgency Efforts	Improve education and training to greatly increase IW knowledge to Airmen throughout their careers
3. The ground attack role of airpower becomes more important when the war becomes conventional	Develop and Nurture Counterinsurgency Expertise Throughout USAF	Embed JTACs at multiple echelons to support planning and operations
4. Bombing civilians is ineffective and counterproductive	Create a Wing-Level Organization for Aviation Advising	Provide additional ISR, transferable CAS, and mobility capability
5. There is an important role for the high-tech aspect of airpower in small wars	Enhance USAF Combat Capabilities for Counterinsurgency	Push info operations, agile combat support capabilities to lower level
6. There is an important role for the low-tech aspect of airpower in small wars		Add squadron of combat aviation advisors to AFSOC
7. Effective joint operations are essential for the effective use of airpower		Establish IW advisory wings in the general-purpose force and in AFSOC
8. Small wars are intelligence intensive		Embed air advisory elements in air components of the COCOMs
9. Airpower provides the flexibility and initiative that is normally the advantage of the guerrilla		Develop and field transferable, COIN-dedicated CAS and armed overwatch platform and light cargo aircraft
10. Small wars are long wars		
11. The US and its allies must put more effort into small wars training		

Sources: *Left*, James S. Corum and Wray R. Johnson, *Airpower in Small Wars: Fighting Insurgents and Terrorists* (Lawrence, KS: University Press, 2003), 425-439; *center*, Alan J. Vick et al., *Air Power in the New Counterinsurgency Era: The Strategic Importance of USAF Advisory and Assistance Missions* (Santa Monica, CA: RAND Corporation, 2006), 132-146; *right*, Richard Mesic et al., *Courses of Action for Enhancing U.S. Air Force "Irregular Warfare" Capabilities: A Functional Solutions Analysis* (Santa Monica, CA: RAND Corporation, 2010), xii – xviii.

<sup>59</sup> Sarah Sewell, Dwight Raymond, and Sally Chin, *MARO-Mass Atrocity Response Operations: A Military Planning Handbook*, accessed 22 January 2017, [http://pksoi.army.mil/default/assets/File/MARO\\_Handbook.pdf](http://pksoi.army.mil/default/assets/File/MARO_Handbook.pdf), 7.

## Historical Examples: Harmony and Disunity of Airpower Operational Constructs

This section synthesizes the three key concepts of small wars, airpower, and the operational level of war. First, an examination of the doctrine of AirLand Battle (ALB) and the 1990s Persian Gulf War is presented, showcasing a textbook example of operational art and airpower, though in a MCO scenario. Next, a review of the early 1960s in Vietnam focuses on the (mis-)use of airpower in small wars, illuminating the need for updates to make airpower more consistent and effective. The MPU Model will be the tool used to conduct these case studies, which are deliberately abbreviated in their review and analysis; the full complexity of the conflict will not be examined, rather, the focus of this section is simply to discover the requirements for the effective and efficient use of airpower in order to formulate an operational construct for its use in future small wars.

### The Quintessential Operational Construct: ALB and the Persian Gulf War Political Factors

On 2 August 1990, Saddam Hussein invaded the sovereign country of Kuwait on the pretense of “defend by attacking” and that it was also justified because Kuwait was actually a part of Iraq – it’s so-called 19<sup>th</sup> Province.<sup>60</sup> With the dawning of a brighter global future following the fall of the Berlin Wall less than a year earlier and the imminent collapse of the Soviet Union, there was a near universal outcry of this egregious and illegal act.<sup>61</sup> The United States, as the evident winner of the Cold War and the world’s only superpower, responded to this crisis in what is often heralded as the textbook case of a clearly defined political end state for the use of the military. In deploying military forces to the region, President George H. W. Bush stated: “Four

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<sup>60</sup> US Department of Justice, Federal Bureau of Investigation, “Baghdad Operations Center,” 24 February 2004, accessed 22 March 2017, <http://nsarchive.gwu.edu/NSAEBB/NSAEBB279/10.pdf>, 5.

<sup>61</sup> The discussion on accepted “rules of war” is beyond the scope of this work, though it is important to recognize that often in small wars not all belligerents subscribe to the prevailing norms of war and/or warfare.

simple principles guide our policy. First, we seek the immediate, unconditional, and complete withdrawal of all Iraqi forces from Kuwait. Second, Kuwait's legitimate government must be restored to replace the puppet regime. And third, my administration, ... is committed to the security and stability of the Persian Gulf. And fourth, I am determined to protect the lives of American citizens abroad.”<sup>62</sup> With this clear narrative, there was general public support (domestically and internationally) at the outset for a military intervention, though the mercurial nature of the will of the people would later become apparent at the conclusion of the war and the *Highway of Death* carnage. The United States executed a comprehensive strategy based upon building a broad international coalition and first pursued diplomatic and economic action to achieve its goals before resorting to military power as a last resort. Much more importantly, the United States gained legitimacy through the United Nations (UN) to sanction the use of military force, thus ensuring that the political factors set the stage for war.

### Operational Factors

Stemming from an unclouded political situation, the mission and enemy for the Gulf War was clear: deter further Iraqi aggression and if required, forcefully eject them from Kuwait. At the time, the Iraqi military was the fourth largest in the world and fielded formidable defensive and offensive capabilities.<sup>63</sup> Thus, as this war began, the United States deployed an immediate defensive force to Saudi Arabia and consistently built up military power throughout the region. This prolonged period of threatening retaliation allowed for intelligence, surveillance and reconnaissance (ISR) operations to succeed in developing target sets against the static, industrialized infrastructure of Iraq; the susceptibility of Iraq to strategic bombing and defeat

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<sup>62</sup> "Public Papers: Address to the Nation Announcing the Deployment of United States Armed Forces to Saudi Arabia," George Bush Presidential Library and Museum, 7 November 2016, accessed 27 November 2016, <https://bush41library.tamu.edu/archives/public-papers/2147>.

<sup>63</sup> Global Security, "Iraqi Army," accessed 15 November 2016, <http://www.globalsecurity.org/military/world/iraq/army.htm>.



through neutralization of centers of gravity was a key advantage to airpower employment.<sup>64</sup> Additionally, Iraqi military forces massed in definitive groups and locations, distinguishable from non-combatants, enabling effective positive identification (PID), which is a key requirement for the employment of lethal force.<sup>65</sup> While the physical environment of the Middle East was vastly different from Eastern Europe, it was from this Cold War-era operational approach for airpower (and the broader war) that the strategy for the Gulf War originated.<sup>66</sup>

#### Military Factors

Any quality reflection on Operation Desert Shield/Storm (ODS) must highlight its success as at least a partial fulfillment of the vision of *Joint* derived from the 1986 Goldwater-Nichols Act (GNA).<sup>67</sup> Yet, this mandate alone was not enough to produce the overwhelming military success witnessed in the Persian Gulf. Ironically, it was the Cold War-centric, defensive-minded, ALB doctrine and operational construct that was the true foundation for victory. ALB envisioned airpower as a supportive force to interdict follow-on Warsaw Pact Forces and thus training, equipment, tactics, and other operational considerations were focused on the deep strike mission.<sup>68</sup> Though never utilized in Eastern Europe, the capabilities and concepts ALB generated were widely employed in the Persian Gulf. For example, large fighter aircraft formations

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<sup>64</sup> Thomas A. Keaney, and Eliot A. Cohen, *Gulf War Air Power Survey Summary Report* (Washington, DC: Office of the Secretary of the Air Force, 1993), accessed 21 April 2017, <http://www.dtic.mil/dtic/tr/fulltext/u2/a273996.pdf>, 128-130.

<sup>65</sup> Ibid.

<sup>66</sup> David E. Johnson, *Learning Large Lessons: The Evolving Roles of Ground Power and Air Power in the Post-Cold War Era* (Santa Monica, CA: RAND Corporation, 2007), 33.

<sup>67</sup> James Williams, *A History of Army Aviation: From Its Beginnings to the War On Terror* (New York, NY: iUniverse, Inc., 2005), 210.

<sup>68</sup> Bruce R. Pirnie et al. *Beyond Close Air Support: Forging a New Air-Ground Partnership* (Santa Monica, CA: RAND Corporation, 2005), 16.

instituted by the Bitburg Air Base, Germany wing commander was considered “ground-breaking” at the time in 1988, but was standard practice just a few years later in ODS.<sup>69</sup>

ALB was the culmination of extensive debates about the concept of ‘Offensive Air Support’ (OAS) missions, which consisted of air interdiction (AI), close air support (CAS), and tactical aircraft (TACAIR) reconnaissance missions.<sup>70</sup> Arguably, the success of ODS can be attributed to the unprecedented collaborative culture and environment produced by ALB where air and land forces understood, supported, and appreciated the other’s mission, roles, and responsibilities. Indeed, the two commanders of the USAF Tactical Air Command (TAC) from 1978-1991 stated that “the mission of tactical air forces was to support the Army” and that the USAF received more support from the Army than it ever had before.<sup>71</sup>

Due to both GNA and ALB, the military had a collective cultural perspective and a collaborative, synergistic methodology for employment that enabled airpower to be utilized as a significant and integrated fashion during the MCO of ODS. The MPU Model suggests that the pre-conceived operational construct for airpower based upon ALB produced overwhelming success when applied to the specific scenario of the Persian Gulf. Senior military leaders deserve recognition for their operational approach during ODS, but it is necessary to realize that they were only able to successfully conduct operational art because the military factors were congruent with the operational and political factors.

### Summary / Takeaways

The sterile nature of this conflict with its unambiguous mission and well-defined enemy, cannot be over-emphasized when making comparisons to other conflicts. Yet, the political,

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<sup>69</sup> John Andres Olsen, *John Warden and the Renaissance of American Airpower* (Dulles, VA: Potomac Books, 2007), 96.

<sup>70</sup> Terrance J. McCaffrey, *What Happened to Battlefield Air Interdiction?* (Maxwell AFB, AL: Air University Press, 2004), 18.

<sup>71</sup> Olsen, 104; James C. Slife, *Creech Blue: Gen Bill Creech and the Reformation of the Tactical Air Forces, 1978-1984* (Maxwell AFB, AL: Air University Press, 2004), 38.

operational, and military factors present during the Persian Gulf War provide a variety of observations for the employment of airpower in small wars. Foremost, as the first war in the dawn of the Information Age, ODS it demonstrated the critical importance of political will, narratives, and public sensitivities, as well as international legitimacy in the conduct of war. The seemingly relentless aerial destruction on the retreating Iraqi forces along the *Highway of Death* threatened to disrupt the strategic coalition and was potentially beyond the mandate to liberate Kuwait. Operationally, the force-on-force nature of this MCO campaign demonstrated the technological superiority of the United States through the use of airpower, ushering in an era where airpower is seen as an essential instrument of national policy, forming the basis for victory.<sup>72</sup> Yet, despite the operational battlefield effectiveness of airpower, a major lesson to be learned from ODS is the imperative to have military factors which possess a vision for airpower that is unified, cohesive, and comprehensive. Without the technical capabilities, cultural posture enabled by the ALB doctrine, and external pressure for increased effectiveness from the GNA, ODS would likely not have been a success, and the magnitude of capabilities via airpower may not have been realized.

## Vietnam War: The Quintessential Small War

### Political Factors

The Vietnam War is a complex military operation with many varying goals and it is a lingering scar on American history. The background for this conflict starts with the beginning of the Cold War and the fight against Communism following World War II, with initial strategic guidance from President Truman including “all practicable measures be taken to prevent further communist expansion in Southeast Asia.”<sup>73</sup> American involvement in the region began with financial and limited material/personnel support to French efforts in the early 1950s. With the

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<sup>72</sup> Crawford and Moon, 121; Walter J. Boyne, *The Influence of Air Power Upon History* (Gretna, LA: Pelican Publishing, 2003), 360.

<sup>73</sup> James S. Corum and Wray R. Johnson, *Airpower in Small Wars: Fighting Insurgents and Terrorists* (Lawrence, KS: University Press, 2003), 236.

French defeat and withdrawal in 1954, a period of gradually increasing US involvement and violence began in and around Vietnam, initially starting with the use of advisors to build indigenous forces and eventually leading to massive aerial bombardment campaigns and large scale ground assaults.<sup>74</sup> Recalling that the Korean War saw intervention from the Soviet Union, and again later during the Cuban Missile Crisis, it is fair to view the overwhelming requirement of military actions in Southeast Asia (SEA) was to limit it from escalating to Total War.<sup>75</sup>

Given that context, the strategic aim and political commitment to the use of military force varied vastly during the 1960s and early 70s, imposing strong political constraints on military operations. This dominating nature of political control is constant throughout all small wars and as Clausewitz said, “the conduct of war is therefore policy itself.”<sup>76</sup> The exact variations of the political aims in Vietnam is beyond the scope of this paper, but their main intents can be summarized as being focused on communication; the US always sought to “demonstrate resolve” through military actions.<sup>77</sup> As Lieutenant General H.R. McMaster noted, the strategic concept in Vietnam of “graduated pressure... was not to impose one’s will on the enemy but to communicate with him.”<sup>78</sup> The fundamental problem with these signaling efforts to compel the enemy to abandon their goals via a coercive strategy that uses minimalist efforts is that it was mismatched against the unlimited political aims of the North Vietnamese. At the peace negotiations for the Vietnam War in 1975, a US Army colonel remarked to his North Vietnam counterpart that the United States was never defeated on the battlefield. In what was surely an

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<sup>74</sup> Robert D Ramsey, III, *Advising Indigenous Forces: American Advisors in Korea, Vietnam, and El Salvador* (Fort Leavenworth, KS: Combat Studies Institute Press, 2011), 27.

<sup>75</sup> H. R. McMaster, *Dereliction of Duty: Johnson, McNamara, the Joint Chiefs of Staff, and the Lies that Led to Vietnam* (New York: HarperCollins, 1998), 28.

<sup>76</sup> Clausewitz, 610.

<sup>77</sup> Mark Clodfelter, *The Limits of Air Power: The American Bombing of North Vietnam* (New York: The Free Press, 1989), 60.

<sup>78</sup> McMaster, 62.

iconic scene with the officer from a Third World country looking at the official representative of one of the world's two superpowers, he relied "That may be so, but it is also irrelevant."<sup>79</sup> In small wars, tactical victories mean little without maintaining the political and strategic objectives at the forefront.

### Operational Factors

Part of the reason that the Vietnam War was such a challenge to the US military was due to the operational environment of SEA. Devoid of major supply bases and logistical centers (or at least politically prohibited from attacking them), physical terrain that composed of densely forested jungle, and with an enemy that used dispersed guerilla warfare and adaptive tactics, Vietnam did not appreciatively resemble the operational problem set of any of the past three wars of Korea, World War I and II. Despite the obvious differences in the OE, US military leaders "were determined to dismiss the contrast between conventional and counterinsurgency combat as an exaggerated premise."<sup>80</sup> The operational requirements of COIN and engaging the Viet Cong (VC) guerillas were assumed to be well within the capabilities of "any good soldier," as exclaimed by the Army Chief of Staff General George Decker.<sup>81</sup>

This lack of understanding and appreciation of the differences between the preferred—and trained for—wars of force-on-force engagement, and that of small wars, where enemies often take an indirect approach, is astonishing. The VC deliberately avoided American strengths of (aerial) interdiction and fortified positions, instead seeking asymmetric advantages to attack where the United States was weak and/or unprepared. Interestingly, in spite of other strategic

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<sup>79</sup> Harry G. Summers, *On Strategy: A Critical Analysis of the Vietnam War* (New York: Random House, 1995), 1.

<sup>80</sup> Corum and Johnson, 238.

<sup>81</sup> Ibid.

miscalculations, it was political leaders that demanded a change to military capabilities and employment concepts to better address the operational factors of Vietnam.<sup>82</sup>

### Military Factors

The US military stubbornly resisted to adapt to the demands of the limited war in SEA, despite mandates from the President and Secretary of Defense (SECDEF) to develop COIN capabilities.<sup>83</sup> The military establishment was doggedly entrenched in a myopic view of future war (primarily centered around atomic weapons), so much so that official doctrine declared “The best preparation for limited war is proper preparation for general war.”<sup>84</sup> The state of ineptitude and indifference for small wars during the Vietnam Era is captured by the fact that in the beginning of 1961, none of the Services had any forces trained specifically for the COIN mission set. Specifically, in the USAF, this lack of institutional value towards small wars was readily apparent as the three full ‘unconventional operations’ wings it possessed during the Korean War were by this point all deactivated.<sup>85</sup> This lack of focus and expertise necessary for the effective use of airpower to address the political and operational challenges of SEA manifested itself in heated debates regarding roles, missions, and authorities for the command and control (C2) and employment of airpower.

In the late 1950s, the concepts of *air mobility* and *air fighting units* as organic US Army capabilities for use in “‘brush fire’ actions against relatively unsophisticated opponents” gained momentum within the DoD.<sup>86</sup> This was advocated during the 1962 *Howze Board*, which produced revolutionary changes to Army aviation employment and capabilities. Outraged, USAF

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<sup>82</sup> Ibid.

<sup>83</sup> Corum and Johnson, 237.

<sup>84</sup> Clodfelter, 30-31.

<sup>85</sup> Corum and Johnson, 238.

<sup>86</sup> Ian Horwood, *Interservice Rivalry and Airpower in the Vietnam War* (Fort Leavenworth, KS: Combat Studies Institute Press, 2006), 30.

leadership accused the Army of “building another Air Force for the Army” and devised various efforts to deploy aircraft that would meet the Army’s valid requirement for close air support and tactical airlift capabilities.<sup>87</sup> This interservice conflict revolved around designing aircraft specifically for CAS and ultimately, the USAF did equip itself with COIN-focused capabilities during the Vietnam War, such as the O-1/L-19 *Bird Dog* for observation, liaison, and forward air control (FAC) missions and the OV-10 *Bronco* Light Armed Reconnaissance Aircraft.<sup>88</sup>

In theater, the USAF was also experiencing disappointments as the US Military Assistance Command, Vietnam (MACV), which was responsible for military actions in Vietnam, minimized USAF representation within its leadership and planning positions. The USAF recognized that “it had little to say in how airpower was to be employed in South Vietnam” and consistently was frustrated by the lack of centralized control of airpower.<sup>89</sup> Unbelievably, the primary C2 method employed during the Vietnam War was the same as that of World War II: the entire Southeast Asia theater was divided into seven major geographic regions known as ‘route packages’ in which the USAF and the Navy exercised independent control over each area. This arrangement was the antithesis of the primary airpower tenet of centralized control and is the epitome of *deconflicting* rather than *integrating* airpower.<sup>90</sup>

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<sup>87</sup> Robert F. Futrell, *Volume 2, Ideas, Concepts, Doctrine: Basic Thinking in the United States Air Force 1961-1984* (Maxwell AFB, AL: Air University Press, 1989), 181.

<sup>88</sup> Benjamin Franklin Cooling, ed., *Case Study in the Development of CAS* (Washington, DC: Office of Air Force History, 1990), accessed 17 January 2017, <http://media.defense.gov/2010/Sep/24/2001330067/-1/-1/0/AFD-100924-035.pdf>, 418, 438.

<sup>89</sup> Corum and Johnson, 242.

<sup>90</sup> Kenyatta H. Ruffin, “Maximizing the Kill Chain: Refining USAF Counterland Doctrine and Operations for the Twenty-first Century” (Research Report, Air Command and Staff College, Maxwell AFB, AL, 2012), 14-15.

At the more tactical level, the creation of the Air Support Operations Center (ASOC) was designed to coordinate CAS within an Army Corps' specific geographic area.<sup>91</sup> The ASOC had varying degrees of authority to re-task air assets already allocated to the Army in order to better meet Army priorities, as relayed from the tactical air control parties (TACP) located with every battalion.<sup>92</sup> This arrangement produced continual improvements, but the overall effectiveness and efficiencies within the entire SEA theater were marginal at best, and reflected the conclusion from independent Army and USAF studies that an approved joint "doctrine for air-ground operations for the utilization of air space over a combat area" did not exist.<sup>93</sup>

### Summary / Takeaways

The Vietnam War is an unfortunate event in American history, but it provides a textbook example of the demanding nuances of small wars across political, operational, and military factors. It demonstrated the expansive extent that military operations are firmly predicated on political concerns, reasserting the fact that political desires restrict and control the use of force.<sup>94</sup> In the case of airpower in this small war, its effectiveness was not only diminished by political limits, but it also suffered from inconsistencies of employment within the specific operational context and difficulties within military factors. Operationally, mobility and localized fire support were a requirement of the wide, dispersed, networked environment and dynamic enemy, which ran counter to the accustomed to (and preferred) static, pre-planned, and predictable nature of MCO and atomic warfare. Militarily, the problems and lessons to be observed are nearly endless,

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<sup>91</sup> Cooling, 423; the Air Operations Center (AOC) also sometimes fulfills the role of directing air support to ground forces (see Ruffin, 24 for an expanded discussion on AOC/ASOC conflict).

<sup>92</sup> Ruffin, 15.

<sup>93</sup> Initial improvements were the result of the "Concept for Improved Joint Air-Ground Coordination" memorandum signed by both the Army and USAF Chiefs of Staff (see Cooling, 428); Futrell, 183.

<sup>94</sup> Clausewitz, 605.



though as presented here, were focused on the cultural/organizational, equipment, and C2 deficiencies in conducting small wars.

## Lessons to be Learned

Robert Osgood admonished America that "Unless we have military policies, weapons, techniques, and tactics capable of supporting limited objectives, we cannot have an effective strategy of limited war."<sup>95</sup> This was the case in the Vietnam War and it had many lasting societal, political, and military ramifications. The largely negative American perception of this war gave rise to the *Weinberger-Powell Doctrine*, focused on only committing to short wars won with overwhelming force, which dominated political factors during the Persian Gulf War and still shapes political and military factors today.<sup>96</sup> Both case studies highlight the intense political moderation of military employment, and in the case of Vietnam, also the reluctance of military leaders to adopt to the operational and political demands created by the small wars scenario.

Following Vietnam, the US military turned its back on fighting this limited type of war since it was not the preferable conflict, nor one the military wanted to train to fight.<sup>97</sup> Yet, military leaders would be wise to adapt and prepare the military enterprise to counter this scenario that, as described in a previous section, appears to be an inevitable (MLCOA) and reoccurring type of conflict. The use of airpower will continue to be instrumental in small wars due to its perceived low-risk nature, limited investment in military force (compared to employing ground forces), and rapid responsiveness. Recognizing this expected high demand, Air Force leaders in particular must ensure that the USAF is able to provide policy makers with a robust set of options and capabilities to counter small wars threat. The next section of this monograph

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<sup>95</sup> Osgood, 241.

<sup>96</sup> Colin L. Powell, "US Forces: Challenges Ahead," *Foreign Affairs* 71, no. 5 (Winter 1992): 38.

<sup>97</sup> Michael. O'Hanlon, "America's History of Counterinsurgency," Counterinsurgency and Pakistan Paper Series, The Brookings Institution, June 2009, accessed 10 November 2016, [https://www.brookings.edu/wp-content/uploads/2016/06/06\\_counterinsurgency\\_ohanlon.pdf](https://www.brookings.edu/wp-content/uploads/2016/06/06_counterinsurgency_ohanlon.pdf).

provides detailed recommendations of how the USAF can transform into a military force appropriate for the realities of the twenty-first century conflict.

## A Vision for Creating a Small Wars Air Force

A former Secretary of the Air Force stated that the USAF role is to “deliver sovereign options” to win the United States’ wars, noting that the most common threats have tended to be small wars.<sup>98</sup> However, there have been no real options when it comes to airpower in contemporary small wars; while the overall military strategy has shifted among ‘clear, hold, build’, COIN, CT, and all the permutations in between, the USAF’s (and thus airpower’s) role has been relegated to a 5-page afterthought, needed only to provide never-ending ISR, bombs, and resupply when requested.<sup>99</sup> Creation of an operational construct for airpower in small wars provides a fresh, more thorough option to respond to the challenges of today and tomorrow.

The vision for an effective and efficient operational construct for airpower in small wars revolves around two central themes: internal institutional value and air-ground integration at all echelons during planning, preparation, execution, and assessment of operations. Arguably, the latter can only be accomplished through the former. Thus, creating these changes will affect the entire spectrum of DOTMLPF-P/I in the USAF and beyond. Though it is not possible in this limited space to fully address every potential improvement to increase airpower’s utility in small wars, the recommendations presented below provide pragmatic solutions to increase the effectiveness and efficiency in the employment, organization, training, and equipping (E-OT&E) of the USAF.

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<sup>98</sup> Michael W. Wynne, “Sovereign Options: Securing Global Stability and Prosperity a Strategy for the US Air Force,” *Strategic Studies Quarterly* 2, no. 1 (Spring 2008): 6, 10, accessed 21 March 2017, [http://www.airuniversity.af.mil/Portals/10/SSQ/documents/Volume-02\\_Issue-1/Spring08.pdf](http://www.airuniversity.af.mil/Portals/10/SSQ/documents/Volume-02_Issue-1/Spring08.pdf).

<sup>99</sup> Although the official Army and Marine Corps (USMC) doctrine states that “airpower and land power are interdependent” in COIN, it unequivocally subordinates airpower as a mere “force multiplier” by only providing five pages to the topic in the 282-page document. See Charles J. Dunlap, Jr., “Air-Minded Considerations for Joint Counterinsurgency Doctrine,” *Air and Space Power Journal* 21, no. 4 (Winter 2007): 63-74.

## Small War Airpower Recommendations – Employment

Airpower expert Benjamin Lambeth stated “There surely must be more imaginative ways of thinking about the changing relationship between air and land power than simply in reductionist either-or terms.”<sup>100</sup> The recommendations of this section abides by this guidance and follows the suggestion of Colonel John Warden to “start our thinking by assuming we can do everything with airpower, not by assuming that it can only do what it did in the past.”<sup>101</sup> In first thinking about what can be achieved by airpower and how to accomplish it, a vision for an operational construct of airpower in small wars emerges, free from any current constraints and perceptions. In starting with this blank sheet mindset, significant improvements to the concept of ‘CAS’ and C2 become apparent.

### More Than CAS – Defining Airpower Accurately and Appropriately

Airpower employment, especially air-delivered fires, suffers from inaccurate processes and terminology derived from restrictive and outdated concepts and practices.<sup>102</sup> With the idiomatic mission of COIN operations to ‘win the hearts and minds’ of the greater populace, air-ground operations suffer from a false notion of ‘merciless pounding from the air’ that kills scores of innocent non-combatants, creating undesired effects and hindering strategic objectives.<sup>103</sup> Certainly, that is not true, as kinetic effects from airpower are among the most discriminate of all fires.<sup>104</sup> Doctrine and operational practices must be updated to reflect this reality and to counter the status quo perceptions based upon embryonic airpower concepts and technology.

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<sup>100</sup> Craig D. Wills, “Airpower, Afghanistan, and the Future of Warfare: *An Alternative View*” (Air War College CADRE Paper 25, Maxwell AFB, AL, 2006), 4.

<sup>101</sup> David S. Fadok, “John Boyd and John Warden: Air Power’s Quest for Strategic Paralysis” (Thesis, School of Advanced Air and Space Studies, Maxwell AFB, AL, 1995), 23.

<sup>102</sup> Phillip S. Meilinger, ed., *The Paths of Heaven: The Evolution of Airpower Theory* (Maxwell AFB, AL: Air University Press, 1997), 36.

<sup>103</sup> Giulio Douhet, *The Command of the Air*, trans. Dino Ferrari (1942; new imprint, Washington, DC: Office of the Air Force History, 1983), 58.

<sup>104</sup> Ruffin, 22.

As a way to control risk, most kinetic-capable fixed-wing aviation sorties in the conflicts since 9/11 have primarily been designated CAS missions, irrespective of whether or not this term adequately defined their operations. However, the actual missions performed in these small wars environment consisted of (non-traditional) ISR or ‘armed overwatch’ to provide top cover for ground forces. Throughout Operation Enduring and Iraqi Freedom (OEF and OIF, respectively), these ‘air support’ sorties were defined in unique, theater prescribed special instructions (SPINS), though this author and several airpower experts agree that official doctrine should universally define these terms, instead of these missions being accepted as a de facto “new kind of CAS.”<sup>105</sup>

Joint Doctrine defines CAS as “air action by fixed- and rotary-wing (RW) aircraft against hostile targets that are in close proximity to friendly forces and that require detailed integration of each air mission with the fire and movement of those forces.”<sup>106</sup> However, the Army described RW assets conducting missions precisely following this description as CCA, further highlighting the need to update airpower concepts across the DoD.<sup>107</sup> The different names, TTPs, and requirements for the exact same airborne effects reflects a gap in trust, unity, and risk management across the Joint Force. Figures 6 and 7 (next pages) propose recommendations to doctrinal terms and processes, in order to disaggregate terminal attack control (TAC) functions to specified levels of training and control, resulting in more accurate, streamlined, and effective airborne fires.<sup>108</sup>

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<sup>105</sup> Ruffin, 22; Pirnie et al., xix; Rebecca Grant, “Armed Overwatch,” *Air Force Magazine* (December 2008): 40-44, accessed 24 February 2017, <http://www.airforcemag.com/MagazineArchive/Documents/2008/December2008/1208overwatch.pdf>, 41.

<sup>106</sup> JP 1-02, *DoD Dictionary of Military and Associated Terms*, 34.

<sup>107</sup> Note: The US Army has removed “CCA” from its manuals and now RW assets performing CAS has no official doctrinal terminology, see US Army Combined Arms Center, *Doctrine Update 3-15* (Fort Leavenworth, KS: Mission Command Center of Excellence, July 2015), 15, accessed 2 February 2017, [http://usacac.army.mil/sites/default/files/publications/Army%20Doctrine%20Update%20\(2015\)%203-15%20\(01%20JUL%202015\).pdf](http://usacac.army.mil/sites/default/files/publications/Army%20Doctrine%20Update%20(2015)%203-15%20(01%20JUL%202015).pdf).

<sup>108</sup> Central to small wars, the “Airborne Fires Matrix” in figure 6 first asks if kinetic effects contribute to achieving JFC objectives and emphasizes the need to ensure timeliness, accuracy, precision, and proportionality (see Ruffin, 40).

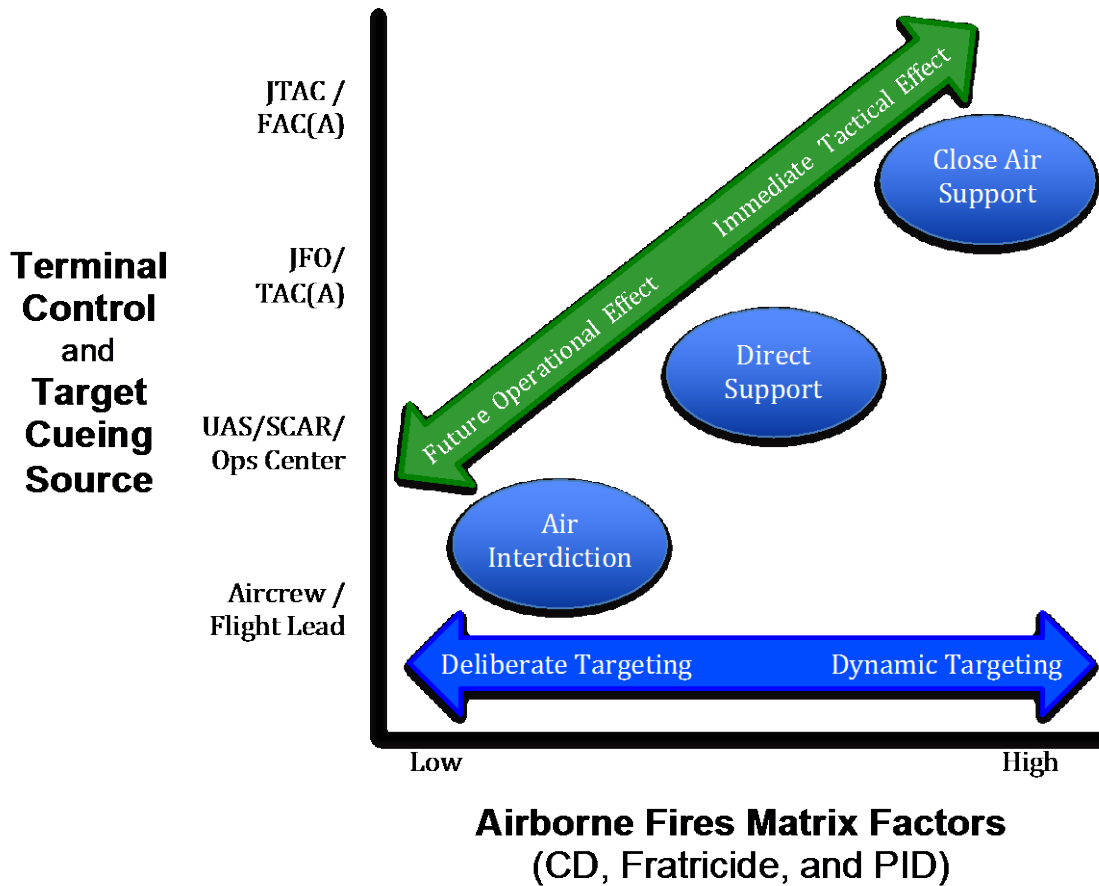


Figure 6. Revised counterland doctrine missions graph.

Source: Adapted from Ruffin, “Maximizing the Kill Chain,” 41.

The three mission sets of CAS, air-ground attack, and AI proposed above present kinetic air-ground operations as a fluid continuum instead of a binary approach currently prescribed by USAF counterland doctrine and underpin the point from the 2005 RAND study that it is necessary to change the antiquated term *CAS*.<sup>109</sup> More importantly, this construct also directly addresses the primary concern of risk mitigation through the appropriate use various TAC personnel or levels. Figure 7 proposes the specific terminology changes to doctrine based upon the missions introduced in figure 6.<sup>110</sup>

<sup>109</sup> Ruffin, 40-41.

<sup>110</sup> See Ruffin, “Maximizing the Kill Chain” for an expanded discussion and rationale for the proposed three counterland missions.

COUNTERLAND MISSION	OLD DEFINITION	REVISED DEFINITION
<b>Close Air Support (CAS)</b>	Air action by fixed- and rotary-wing aircraft against hostile targets that are in close proximity to friendly forces and that require detailed integration of each air mission with the fire and movement of those forces.	Air action by fixed- and rotary-wing aircraft against hostile targets that are in close proximity to friendly <b>ground</b> forces and that require detailed integration <b>and terminal attack control of airborne fires</b> with the fire and movement of those forces.
<b>Air-Ground Attack (AGA)</b>	N/A	Air action by fixed- and rotary-wing aircraft against targets in order to achieve current tactical, near-term tactical, or future operational objectives of friendly ground forces. This air action <b>requires integration with these forces to prevent fratricide, collateral damage, and/or other unintended effects</b> . Special operations forces also employ AGA to execute C2 during sensitive missions.
<b>Air Interdiction (AI)</b>	Air operations conducted to divert, disrupt, delay, or destroy the enemy's military potential before it can be brought to bear effectively against friendly forces, or to otherwise achieve objectives. Air interdiction is conducted at such distance from friendly forces that detailed integration of each air mission with the fire and movement of friendly forces is not required.	Air operations conducted to divert, disrupt, delay, or destroy the enemy's military potential before it can be brought to bear effectively against friendly ground forces, or to achieve JFC objectives <b>independent of and/or supported by effects from land or maritime forces</b> . Air interdiction is conducted at such distance from friendly forces that <b>terminal attack control</b> is not required.

Figure 7. Definitions of current and revised countermand missions.

Source: Adapted from Ruffin, “Maximizing the Kill Chain,” 42.

Collateral damage is of primary concern in small wars, as well as in the SOF-centric realm of CT; the adoption of the current term *close air support* is based upon the necessity to retain the strictest—or closest—level of control for these attacks. This concept also recognizes the critical importance of ISR, as demonstrated by the inclusion of the ISR Tactical Controller (ITC) and Tactical Air Coordinator (Airborne) [TAC(A)], two duties also emphasized in SOF missions.<sup>111</sup> Although this concept was developed with a focus on kinetic effects, its applicability

<sup>111</sup> For more info regarding the ITC, see Adam B. Young, “Employing Intelligence, Surveillance, and Reconnaissance: Organizing, Training and Equipping to Get It Right,” *Air and Space Power Journal* (January-February 2014): 26-44, accessed 21 March 2017, <http://www.au.af.mil/au/afri/aspj/digital/pdf/articles/2014-Jan-Feb/F-Young.pdf>; TAC(A) is the more appropriate and doctrinal term for the role of ‘Air Warden’ (AW), a new term haphazardly created by the SOF community due to confusion and inconsistencies in TAC functions and responsibilities. For further discussion on TAC(A) and AW see Alexander E. Biegalski, “Tactical Air Coordinator (Airborne) in the Special Operations Air Ground System,” USAF Weapons School Paper, Nellis AFB, NV, 2016.

can be expanded to better encompass non-kinetic effects and missions. Ultimately, more accurately and appropriately defining airpower (with associated changes in doctrine, structure, and TTPs) all revolves around the issue of commanding and controlling effects from airpower—the subject of the next section.

## C2 – Integrate and Operationalize Squadrons

According to the AFFOC, the linear-based and stove-piped AOC will transition to a multi-domain operations center (MDOC) that provides dynamic C2 and is the operational headquarters (HQ) for the USAF's efforts to plan, task, execute, and assess missions.<sup>112</sup> While the concepts presented for MDOC and multi-domain C2 (MD-C2) seem sensible at first glance, when viewed through the perspective of executing small wars they are incomplete and fall woefully short of what is needed. The fundamental C2 challenge of airpower in small wars is that airpower is dependent upon integration for success—the totality of airpower must be integrated with the full scope of ground forces objectives, scheme of maneuver, and fires.

The current Theater Air-Ground System (TAGS) C2 construct is an intermingled and complex arrangement that features misapplied command relationships, as can be seen in figure 8 (next page). The simple replacement of the MDOC for the AOC does nothing to resolve the issues deriving from this chaotic structure, nor does it lead to true integration. As highlighted in Vietnam, the ASOC was designed to serve as the primary conduit between the land and air domain commanders, but as technology and capabilities have advanced, the blurring of the roles and responsibilities between the ASOC and AOC (MDOC) have become a hindrance of redundancy and confusion.

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<sup>112</sup> AFFOC, 14.

According to doctrine, the ASOC is designated as the “primary control agency... for the execution of CAS,” but the AOC is intimately involved with “direct[ing] aerospace support for land forces.”<sup>113</sup> The utility of the ASOC was high nearly 50 years ago, while today its obsolescence and inefficient air middle-man functions further hinder effective airpower employment.

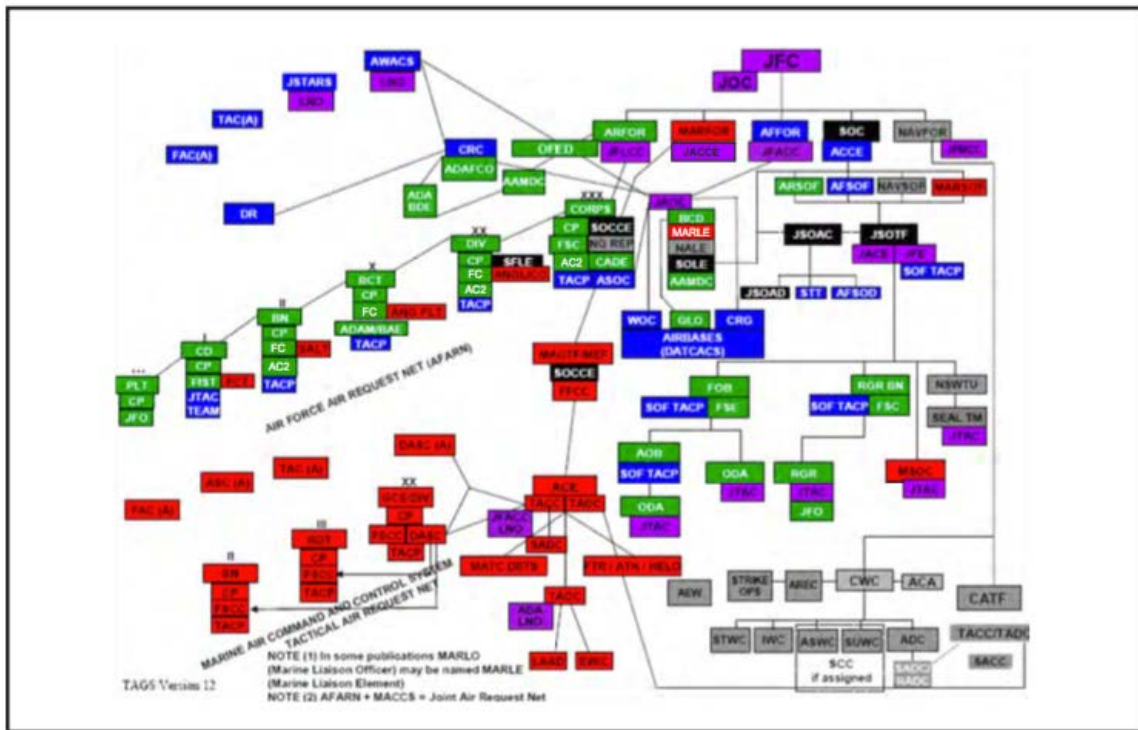


Figure 8. Theater Air-Ground System (TAGS).

Source: AFTTP 3-3.JTAC, *Joint Terminal Attack Controller (JTAC)*. Washington, DC: Government Printing Office, August 2010, 2-34.

In attempts to merely adapt to these significant changes in airpower C2 requirements instead of pursuing the institutional revolution that is truly needed, the USAF abruptly created the “Joint Air Component Command Element” (JACCE) and the Joint Air-Ground Integration Cell (JAGIC) as a cure for the symptom instead of addressing the fundamental, persistent problem of poor integration. JAGIC attempts to improve “Joint integration of air and land component C2

<sup>113</sup> Air Force Tactics, Techniques, and Procedures (AFTTP) 3-3, *Joint Terminal Attack Controller (JTAC)* (Washington, DC: Government Printing Office, August 2010), 2-38.



operations within an Army division commander's area of operations (AO)” while the JACCE is merely a liaison element to facilitate comprehensive planning and effective C2, but contains no actual authorities.<sup>114</sup> JAGIC basically combines the current ASOC and a Tactical Operation Center (TOC) by rearranging seat assignments without addressing fundamental functions, while the JACCE essentially tackles issues regarding rank equivalency; neither one of these ‘improvements’ resolve the real problem of the lack of thorough and consistent integration.<sup>115</sup>

The future of airpower C2 in all conflicts, and especially within a small wars context, is dependent upon two key requirements: integration of all airpower capabilities during planning and air-ground coordination at all levels/echelons. Creation of this C2 structure requires the operationalization of USAF squadrons, beyond just the revitalization currently being pursued.<sup>116</sup> The mismatch of ground force planning in IW (from the tactical level up) and airpower planning (from the operational level down) can be alleviated by an empowerment and focus of squadrons to be an actual “core fighting unit.”<sup>117</sup> In this new construct, units focus on the C2 of their tactical operations, not just on administrative management and the reporting of its missions up the chain. The AOC’s current kill chain construct of find, fix, track, target, engage, and assess (F2T2EA) must not only be pushed down to the squadron level, but also transformed to a more responsive find, fix, finish, exploit, analyze, and disseminate (F3EAD) process which rapidly and fully integrates intelligence into current operations, as seen in figure 9 (next page).

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<sup>114</sup> USAF and United States Army, *Joint Air-Ground Integration Cell, Tactical Operating Concept* (Draft, version 6.0), no date (circa June 2011), ii; Cooper, James C., “The Joint Air Component Coordination Element: Middleman or an Effective Airpower Broker?” Report, Naval War College, Newport, RI, 2012, accessed 14 November 2016, <http://www.dtic.mil/dtic/tr/fulltext/u2/a563894.pdf>, 2.

<sup>115</sup> Ruffin, 45.

<sup>116</sup> US Air Force Chief of Staff, *CSAF Focus Area: The Beating Heart of the Air Force...Squadrons!* (Washington, DC: Government Printing Office, August 2016), accessed 15 December 2016, [http://www.af.mil/Portals/1/documents/csaf/letters/CSAF\\_Focus\\_Area\\_Squadrons.pdf](http://www.af.mil/Portals/1/documents/csaf/letters/CSAF_Focus_Area_Squadrons.pdf), 2.

<sup>117</sup> *Ibid.*

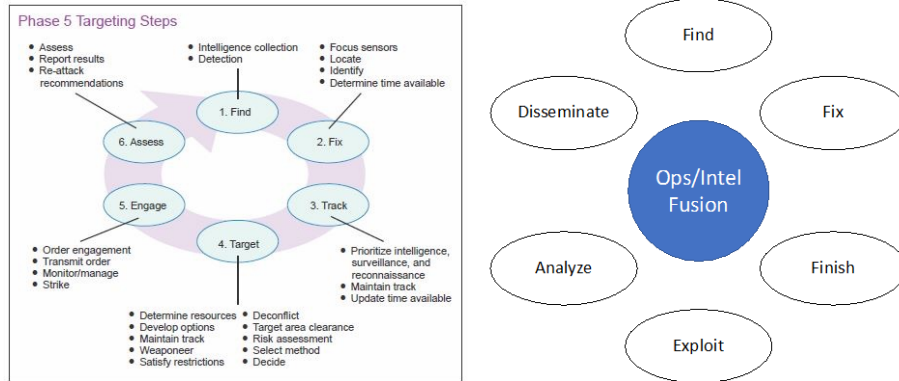


Figure 9. Comparison of F2T2EA and F3EAD processes.

Sources: (left) JP 3-60, *Joint Targeting*. Washington, DC: Government Printing Office, 2013, II-23; (right) Kenyatta H. Ruffin, adapted from Jimmy A. Gomez, “The Targeting Process: D3A and F3EAD,” *Small Wars Journal*, 16 July 2011, accessed 25 April 2017, <http://smallwarsjournal.com/jrnl/art/the-targeting-process-d3a-and-f3ead>

Currently, the full capabilities of airpower are compartmentalized and hoarded at the AOC, creating the situation where the Joint Forces Air Component Commander (JFACC)-level is the first opportunity for an Airman to exercise authority and control over the entirety of airpower: *space, cyber, and the multiple aspects of air domain (e.g., mobility, strike, ISR) are not ever truly integrated into the whole as the AOC only really manages these disconnected parts.* As highlighted in table 4, “the support role of airpower (e.g., reconnaissance, transport, and so on) is usually the most important and effective mission in a guerilla war.”<sup>118</sup> Indeed, the utilization of airpower functions into distinct, individual silos is the very definition of ‘penny-packing airpower’ that is detested by Airmen.<sup>119</sup> The stove-piped functionalities of squadrons must be re-structured to feature cross-mission capabilities and the redistribution of C2 authorities currently spread across the AOC, ASOC, and JACCE. A further discussion of the operationalization of the squadron is the focus of the next section’s recommendations.

<sup>118</sup> Corum and Johnson, 427.

<sup>119</sup> For discussion on the concept of “penny packing” airpower, see Rebecca Grant, “Penny Packets, Then and Now,” *Air Force Magazine* (June 2010): 56- 59, accessed 4 February 2017, <http://airforcemag.cloudapp.net/MagazineArchive/Documents/2010/June%202010/0610penny.pdf>.

The new operational construct for airpower employment in small wars is created by significant and fundamental changes to the concept of CAS and C2, increasing airpower's effectiveness and efficiency. Yet, because both of these recommendations primarily revolve around better integration, realization of these improvements will only be made possible through changes in USAF organization and training.

## Small War Airpower Recommendations – Organization and Training

A core design principle states 'form follows function,' meaning the structure of the building (or institution) should be based upon its intended purpose.<sup>120</sup> Recalling that the US military is expected to fight and win the nation's various types of wars, one must ask if the USAF is organized to win in small wars. According to Eliot Cohen and John Gooch, an examination of "the organizational dimension of strategy" that looks at deficiencies and adequacies of the institution is rarely performed; this monograph follows their guidance and offers proposals to shape the institutional USAF.<sup>121</sup> The following recommendations center around the need to create organizations integrated and flexible enough to conduct key airpower roles in small wars (i.e., CAS/strike, ISR, mobility, and building partner capacity (BPC)), and to develop the personnel and training processes necessary for these organizations to function.

### A Restructured and Repurposed USAF (Air-Ground) Expeditionary Center

Current USAF organizational structure segregates the various components of airpower and prohibits its unity of command until at echelons below the JFACC, violating the AFFOC's central theme of operational agility.<sup>122</sup> The AFFOC further explains that operational agility is said to be dependent upon flexibility, speed, coordination, balance, and strength—the current myopic

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<sup>120</sup> Louis H. Sullivan, "The Tall Office Building Artistically Considered," *Lippincott's Magazine* (March 1896): 403–409, 3 February 2011, accessed 12 April 2017, <https://ia800200.us.archive.org/34/items/tallofficebuildi00sull/tallofficebuildi00sull.pdf>, 408.

<sup>121</sup> Eliot A. Cohen and John Gooch, *Military Misfortunes: The Anatomy of Failure in War* (New York: Simon and Schuster, 1990), 57.

<sup>122</sup> AFFOC, 14

and static organizations do not enable this concept. Despite not mentioning the term *squadron* once in the nearly 50-page AFFOC, operational agility is obtained through restructuring the components of and the subsequent aggregation and allocation of these core airpower employment entities so that multiple airpower effects and mission sets are present under commanders at a much lower level. The dynamic nature of small wars and the increased jointness of operations at all levels makes the current doctrine and structure—which was formulated during the Cold War—not only obsolete, but a barrier to effectiveness and efficiency.<sup>123</sup>

The USAF should create integrated organizations which feature a cross-section of mission capabilities, competencies in BPC, and maintain a robust, habitual relationship with ground forces. The USAF can easily transform into an organization that truly values small wars by modifying structures and functions currently existing within the USAF Expeditionary Center, 93rd Air-Ground Operations Wing (AGOW), the 57th Wing's emerging CAS-Integration Group (CIG) and the Air Force Special Operations Command's (AFSOC) 6th Special Operations Squadron (SOS). A summary of the missions and description of the four existing organizations mentioned is contained in table 5 (next page).

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<sup>123</sup> Ibid.; Pirnie et al., xv.

Table 5. Summary of USAF A-G integration-centric organizations

ORGANIZATION	MISSION / GENERAL DESCRIPTION
USAF Expeditionary Center	Center of Excellence for advanced mobility and combat support training and education; direct oversight for en route and installation support, contingency response and partner capacity-building mission sets within the global mobility enterprise
93 AGOW	Provides highly-trained ground combat forces capable of integrating air and space power into the ground scheme of fire and maneuver
CAS Integration Group (CIG)	Integrate airpower into Joint, High-End, and CAS operations while supporting and educating Joint and Coalition warfighters
6 SOS	Assess, train, advise and assist foreign aviation forces in airpower employment; help friendly and allied forces employ and sustain their own airpower resources and, when necessary, integrate those resources into joint and combined (multi-national) operations

Source: (first) US Air Force Expeditionary Center, “About Us,” 11 February 2013, accessed 10 December 2016, <http://www.expeditionarycenter.af.mil/About-Us/Fact-Sheets/Display/Article/438548/us-air-force-expeditionary-center/>; (second) Moody Air Force Base, “93d Air Ground Operations Wing,” accessed 1 November 2016, <http://www.moody.af.mil/AboutUs/Units/93dAGOW.aspx>; (third) 57th Operations Group, “57 OG\_CIG\_TASS Brief\_Jan\_2017” (presentation, Nellis Air Force Base, January 2017), slide 1; (fourth) US Air Force Special Operations Command, “6th Special Operations Squadron,” 23 September 2013, accessed 5 December 2016, <http://www.afsoc.af.mil/AboutUs/FactSheets/Display/tabid/5046/Article/877958/6th-special-operations-squadron.aspx>.

The proposed new organization would combine the task force-nature, rapid mobility, and C2 functions resident within the USAF Expeditionary Center, the CAS (and to a lesser extent, ISR) and integration-centric aspects of the AGOW, the education and training focus from the CIG, and the BPC competencies and concept of owning iron (i.e., aircraft) from the 6 SOS into a comprehensive whole, organized under a single Airman, as seen in figure 10 (next page). This transformed USAF Air-Ground Expeditionary Center (AGEC) would contain elements of cyberspace power and other key enablers, producing the operationalization of the squadron previously mentioned. By first ensuring internal integration by aggregating these currently siloed mission sets, the AGEC would serve as a true *center of excellence* for the entirety of USAF efforts in small wars, fostering a comprehensive integration of airpower into joint operations.<sup>124</sup>

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<sup>124</sup> US Air Force, “AF to Grow, Enhance Nellis Group with Close Air Support Focus,” Secretary of the Air Force Public Affairs, 16 August 2016, accessed 5 December 2016, <http://www.af.mil/News/ArticleDisplay/tabid/223/Article/916255/af-to-grow-enhance-nellis-group-with-close-air-support-focus.aspx>.

The basic functions and description of each major sub-organization of the AGECE is provided in figure 11 (next page).

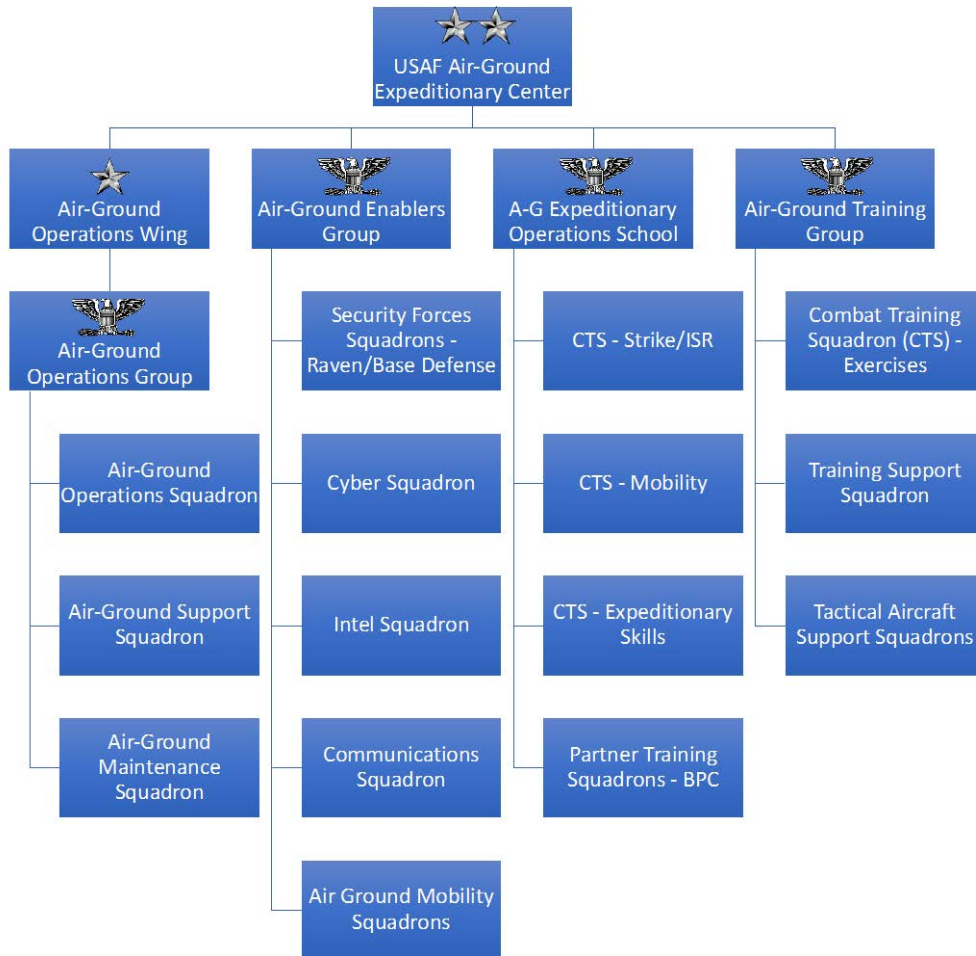


Figure 10: Proposed USAF Air-Ground Expeditionary Center (AGECE) organization.

Source: Kenyatta H. Ruffin.

ORGANIZATION	MISSION / GENERAL DESCRIPTION
USAF Air-Ground (A-G) Expeditionary Center (AGEC)	(DoD's) Center of Excellence for the comprehensive integration of air, space, and cyberspace power into IW activities. Ensures Joint Force Commander (JFC) receives trained and tailored forces across the full spectrum of airpower activities/missions. Educates and supports Airmen, Joint, Allied, and Friendly Forces in the conduct of core IW missions and skills.
A-G Operations Wing/Group AGOW/AGOG	Provides combat assets and personnel for integrated, comprehensive, and scalable airpower integration for Joint, Coalition, interagency (IA), and independent IW operations. Supports other AGECE activities as mission demand allows.
A-G Operations Squadron (AGOS)	Assigned ISR, mobility, and strike personnel along with strike/ISR assets (i.e., light attack/armed reconnaissance) to form habitual relationships with ground maneuver units. With the addition of required enablers, employs as tailored and scalable <i>Airpower Integration Teams</i> (AIT) as a replacement of the TACP concept.
A-G Support Sq (AGSS)	Conducts typical operational support squadron (OSS) functions for each AGOG, to include scheduling, intelligence reach-back, current operations management, planning, supports the group HQ, etc.
A-G Maintenance Sq (AGMXS)	Maintains fleet of strike/ISR assets for each AGOG. Assigns or attaches a detachment/aircraft maintenance unit (AMU) to each AGOS and AIT.
A-G Enabler Group (AGEG)	Maintains mission ready personnel in the following squadrons to be assigned and/or attached to the AGOS/AIT as required: <ul style="list-style-type: none"> <li>- Security Forces Squadron (Ravens and 820 SFG airbase defenders)</li> <li>- Cyber Squadron (National-Tactical Integration [NTI] teams)</li> <li>- Intelligence Squadron (Functional manager for intel support across AGECE, maintains cadre of C2 expertise)</li> <li>- A-G Mobility Squadron (Airfield and logistical operations currently resident in the Contingency Response Wings)</li> <li>- Communications Squadron (Functional and equipment manager for C2, computer, and communications systems across AGECE)</li> </ul>
A-G Expeditionary Operations School (AGEOS)	Provides education, practical training and qualifications for airpower integration into IW and A-G focused operations for Joint and Allied forces. Conducts BPC operations to assist friendly foreign aviation forces in all aspects of airpower employment operations.
A-G Training Group (AGTRG)	Responsible for exercise and training through conduct of "FLAG level" and other exercises. Supports AGEOS activities and learning outcomes (i.e., qualification courses). Serves as AGECE's liaison to key functions and activities (e.g., Air-Land-Sea Application (ALSA) center, Joint Fires Executive Steering Committee, Weapons and Tactics Conference (WEPTAC), etc.). Manages and oversees: <ul style="list-style-type: none"> <li>- Combat Training Squadrons (CTS)</li> <li>- Partner and Advisory Training Squadrons</li> <li>- Training Support Squadron</li> <li>- Tactical Air Support Squadrons (Operates and maintains strike/ISR aircraft; enables organic aircraft to support training operations)</li> </ul>

Figure 11: Proposed USAF AGECE description.

Source: Kenyatta H. Ruffin.

The concept of operations for the AGECE is not revolutionary, but it enables the AFFOC's vision of operational agility through employment of a balanced mix of capabilities, utilization of performance-optimized teams, and execution consistent with the principles of mission command.<sup>125</sup> The AGECE, primarily through the revised AGOW, would be task-organized for each specific small wars scenario into units (expeditionary squadrons, air-ground task forces and/or AITs) that are capable, flexible, and agile enough to operate as a part of an existing parent USAF organization (e.g., AOC or Air Expeditionary Wing), independently assigned to a Joint Task Force (JTF), or even as part of a joint-interagency task force (JIATF).

The AGECE provides a significant improvement over the current 'support' and liaison arrangement with ground forces as it not only focuses on joint integration of airpower capabilities, but it also has the means to provide these effects.<sup>126</sup> Currently, the responsibility for ensuring the effective integration of the key CAS, ISR, and mobility functions with the ground scheme of maneuver and objectives are performed by third-party mediators from a separate Air Support Operations Squadron (ASOS) that is neither an expert on the ground component requirements nor on the detailed capabilities of the specific air unit(s) supporting the ground forces.<sup>127</sup> In the restructured, operationalized squadrons within the AGECE, a truly joint partnership is forged as ground battalion commanders and air squadron commanders, along with the personnel they lead, work systemically and consistently to achieve synergistic results. A core element of AGECE units consists of members of a revitalized, better trained and educated Tactical Air Control Party (TACP).

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<sup>125</sup> AFFOC, 14.

<sup>126</sup> Of note, the nomenclature of *support* in unit descriptions is minimized as the role of AEC units is to help achieve the JFC objectives and to be seamlessly integrated into his or her operational approach; the JFC, along with recommendations from the JFACC, will subsequently assign supported and supporting relationships.

<sup>127</sup> Currently the USAF utilizes Airmen trained in the general understanding of kinetic airpower capabilities to increase the Army's knowledge and facilitate their support requests; the proposed AGECE concept revolutionizes this construct by having the actual unit that is partnered to accomplish the mission be responsible for the full planning, preparation, execution, and assessment of the operation.



The AGECE is the realization of the long-recognized fact that the “TACP as a whole must be utilized better to meet decentralized mission requirements.”<sup>128</sup> The robust, actual integration at the lowest level and on a continuous basis created by the AGECE would form true JAGICs, with the structures and authorities to effect change within the different Service’s planning, execution, and C2 systems, rather than a mere ‘seating chart’ as currently employed.<sup>129</sup> With cyber specialists and other key personnel from within the AGECE attached to AGOW squadrons, comprehensive, lethal, and performance-optimized teams will be formed and employed to truly integrate all airpower capabilities. The inclusion of functional airpower experts of such a diverse spectrum of airpower mission sets in a single entity at the tactical level strengthens each member of the AGECE, necessitating a change of the name of this capability that is tailored for each specific operation to something more accurate than *TACP*. (This monograph proposes the name *Airpower Integration Team (AIT)* to reflect the comprehensive function of these Airmen.) As a result of this reorganization, the AGECE operational construct eliminates the ASOC, passing its C2 and other integrating functions are to the actual units and/or the AOC with the accompanying US Army Battlefield Coordination Detachment. While this construct challenges contemporary cultural norms, the fact that current structure and processes based on third-party mediators were created during WWII when command, control, computer, and communications (C4) capabilities were nascent, underscores the need to overhaul the air-ground integration processes for the twenty-first century. The significant changes called for in this modernization will only be possible through effective training.

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<sup>128</sup> Chris Delong, “TACP Integration,” lecture, 14th Annual JCAS Symposium, Norfolk, VA, 4 May 2011.

<sup>129</sup> Ruffin, 45; Matthew S. Taylor, “Joint Air Ground Integration Cell” Position Paper, 712 Air Support Operations Squadron, Fort Hood, TX, 2 March 2011), 1-3.

## Developing Twenty-first Century Airmen for Small Wars

The operational construct for airpower in small wars presented in the AGECE is dependent upon disciplined creativity, initiative, critical thinking, and trust-filled relationships that allow Airmen to appropriately respond to dynamically unfolding tactical situations.<sup>130</sup> However, as warned by Colonel John Warden, adopting an operational construct based upon a “high degree of initiative and independence at every subordinate level may be risky, if peacetime training has emphasized detailed operations orders issued from high staffs.”<sup>131</sup> Thus, the AGECE not only provides an improved structure for employment, but also a robust method to “strengthen the development of Airmen... steeped in the business of Airpower.”<sup>132</sup> Group Commanders (officers in the grade of O-6) and other higher echelon leaders within the AGECE would transition from an administrative, oversight-centric role that currently characterizes most USAF flying organizations into operational Warrior-Airmen charged with ensuring the integration of airpower into joint operations. Simply put, in addition to revolutionizing airpower force projection, the AGECE fulfills the vision of the CSAF to purposefully and systematically develop Airmen’s joint warfighting expertise.<sup>133</sup>

As highlighted in figures 10 and 11, the AGECE contains an Air-Ground Expeditionary Operations School and Training Group (AGEOS and AGTRG, respectively) tasked with the education and training of both internal and external audiences. The AGEOS would become the focal organization for producing “fifth-generation warriors’ who integrate air and ground

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<sup>130</sup> AFFOC, 7.

<sup>131</sup> John A. Warden, III, *The Air Campaign Planning for Combat* (National Defense University Press, 1988), accessed 10 December 2016, <http://www.au.af.mil/au/awc/awcgate/warden/warden-all.htm>.

<sup>132</sup> US Air Force Chief of Staff, *CSAF Focus Area: Strengthening Joint Leaders and Teams*, 1.

<sup>133</sup> *Ibid.*

operations on the joint battlefield.”<sup>134</sup> The AGEOS would retain most of the functionality of the current USAF Expeditionary Operations School (EOS—i.e., mobility-focused training—and would acquire the accession pipeline for Battlefield Airmen by absorbing the recently organized Battlefield Airmen Training Group, headquartered at Lackland Air Force Base. The 6th Combat Training Squadron (CTS) and other exercise-focused CTS of the 57th Wing’s CIG would maintain their focus on air-ground integration, doctrine, and training as a part of the AGEOS and AGTRG. Additionally, elements of Detachment 1, 505th Command and Control Wing (CCW) and other C2 expertise would be incorporated into the AGTRG. Finally, the BPC roles and capacity of the 6 SOS would be absorbed into multiple Partner and Advisory Training Squadrons (PATs) and elsewhere be incorporated across the AGEOS. As evident in historical examples, RAND studies, and other critiques, BPC is a critical component of airpower in small wars; increasing these competencies and inclusion of it into a more mainstream aspect of the organization outside of the detached AFSOC community would demonstratively highlight the USAF’s commitment to winning small wars.<sup>135</sup> Roles previously accomplished by elements of the existing USAF EOS (e.g., Director Mobility Forces and Advanced Studies in Air Mobility courses) would return to Air Mobility Command (AMC) and the focus on airpower integration into major combat operations would be maintained by the USAF Air Warfare Center (USAFWC).

The benefit and rationale for consolidating these organizations is to abide by the principles of unity of command and simplicity, drastically improving the cohesiveness of air-ground integration in small wars. Collectively, the existing organizations currently educate and

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<sup>134</sup> 37th Training Wing, “New Air Force Unit Activated to Better Train Elite Combat Airmen,” 502nd Air Base Wing Public Affairs, 2 June 2016, accessed 5 March 2017, <http://www.37trw.af.mil/News/tabid/2992/Article/789651/new-air-force-unit-activated-to-better-train-elite-combat-airmen.aspx>.

<sup>135</sup> Alan J. Vick et al., *Air Power in the New Counterinsurgency Era: The Strategic Importance of USAF Advisory and Assistance Missions* (Santa Monica, CA: RAND Corporation, 2006), 133; see also table 4.

train over 10,000 Joint and Coalition personnel in air-ground centric subjects annually.<sup>136</sup> Clearly, it is good that personnel participating in these programs all share the same information and through combining these functions under a single training enterprise, they will also receive a greater degree of breadth and depth of information. As presented, the AGEOS and AGTRG are independent organizations due to the academic versus exercise missions, respectively, but could easily be restructured to have the training group subordinate to the school, as all are a part of the single AGEOS. In either case, the expectation is that these ‘trainer’ Airmen would have a transparent ‘operational’ capability through the effortless transfer within the AGEOS, allowing for better personnel ops tempo management—a definitive benefit in and of itself.

The ideas presented thus far provide an executable and viable solution to improve USAF effectiveness in small wars and achieve the vision of the AFFOC. This monograph argues that any of these employment, organization, and training improvements would have positively impacted the conduct and outcomes of the Vietnam War, OEF, and other modern small wars. Yet, the full potential for increasing the effectiveness and efficiency of airpower cannot be attained without significant improvements to the actual airpower assets and capabilities.

## Small War Airpower Recommendations – Equipment

Since the start of this monograph in the fall of 2016, the USAF has signaled an institutional shift in its approach to small wars by indicating a sincere interest in acquiring a light attack/armed reconnaissance (LAAR) aircraft.<sup>137</sup> This marks a significant change in USAF

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<sup>136</sup> Nellis Air Force Base, “6th Combat Training Squadron,” 17 July 2012, accessed 1 November 2016, <http://www.nellis.af.mil/About/FactSheets/Display/tabid/6485/Article/284157/6th-combat-training-squadron.aspx>; U.S. Air Force Expeditionary Center, “USAF Expeditionary Operations School,” 11 February 2013, accessed 1 November 2016, <http://www.expeditionarycenter.af.mil/eos>.

<sup>137</sup> Valerie Insinna, “US Air Force Chief Lends Support to Light Attack Aircraft Buy,” Defense News, 18 January 2017, accessed 21 March 2017, <http://www.defensenews.com/articles/air-force-chief-lends-support-to-light-attack-aircraft-buy>. For a detailed discussion on possible LAAR aircraft see Michael W. Pietrucha, “The Pentagon Has Two Choices for Light-Attack Planes: An Expert in Counter-insurgency Aircraft Explains the Options,” War Is Boring, 3 April 2017, <https://warisboring.com/the-pentagon-has-two-choices-for-light-attack-planes-2e4306197b1e#.aorioqa6g>.

culture that has been a long time coming, as highlighted earlier in this monograph with the discussion of ‘America’s Two Air Forces’. The AFFOC signaled the start of this shift, declaring:

To conduct follow-on sustained operations, or a sustained irregular warfare effort in a permissive or semi-permissive environment, AF forces primarily will use lower-cost/lower-capability assets, efficiently expending resources to achieve joint force commander (JFC) objectives while relying more on partner nations.<sup>138</sup>

Due to the current debates regarding these capabilities, only limited recommendations are provided, as the USAF is already taking major actions in the realm of equipping for small wars. However, before declaring victory on actually procuring the needed small wars-focused airpower capabilities, a brief review of recent USAF efforts to obtain these assets is warranted. This review is conducted through the examination of mobility, ISR, and strike (CAS) assets.

### Mobility Capabilities

The recent history of air mobility assets tailored for small wars is filled with glimmers of hope, followed by unbelievable tragedy. Both the Light Mobility Aircraft (LiMA) and Joint Cargo Aircraft (JCA) had their beginning in the mid 2000s, with the former ceasing to exist as a funded concept in Fiscal Year (FY) 2013, but the latter going through to production and abbreviated fielding.<sup>139</sup> The JCA resulted in the acquisition of the C-27 *Spartan* designed to “meet the time-sensitive, mission-critical needs to the forward deployed warfighter.”<sup>140</sup> Unfortunately, regardless of the mission need, the C-27 Program was terminated in 2014, just three years after arrival of the first production models, and even while aircraft were still being built that never saw actual use.<sup>141</sup> This was due in large part to budgeting problems and

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<sup>138</sup> AFFOC, 7.

<sup>139</sup> Global Security, “Light Mobility Aircraft,” accessed 15 November 2016, <http://www.globalsecurity.org/military/systems/aircraft/lima.htm>.

<sup>140</sup> Mitch Gettle, “C-27J Spartan Named as Joint Cargo Aircraft,” US Army Website, 19 June 2007, accessed 10 November 2016, [https://www.army.mil/article/3715/C\\_27J\\_Spartan\\_Named\\_as\\_Joint\\_Cargo\\_Aircraft](https://www.army.mil/article/3715/C_27J_Spartan_Named_as_Joint_Cargo_Aircraft).

<sup>141</sup> Michael Hoffman, “Time Runs Out on C-27J,” *DoD Buzz*, October 7, 2013, accessed 14 November 2016, <https://www.dodbuzz.com/2013/10/07/time-runs-out-on-c-27j/>.

constraints, again highlighting the need for efficient utilization of military force during the current period of fiscal austerity. Yet, the miscalculations regarding the C-27 Program went from bad to worse when the Special Inspector General for Afghanistan Reconstruction (SIGAR) found that the C-27s acquired for the Afghan Air Force as a part of BPC efforts were literally sent to the trash heap, providing a \$32,000 return of investment of a \$500 million procurement program.<sup>142</sup>

While analysts claimed that the JCA's "innovative acquisition execution strategies and precise execution across the joint services are models for other programs to emulate," it is clear that the final outcome should be avoided.<sup>143</sup> The recommendations for preventing this disaster from reoccurring are found in developing more robust PPBE guidance and seeking the legal authorities to allow for more flexibility in managing program costs. The latter recommendation is mostly outside of the hands of the USAF, but creation of a more complete PPBE outlook is within USAF control and is directly benefited by establishing the necessary, comprehensive operational construct for airpower in small wars. An exploration of the USAF acquisition of ISR capabilities will further highlight the need for a longer, more holistic plan for equipping the USAF for small wars.

### ISR Capabilities

In April 2008, then-SECDEF Robert Gates established a task force to examine ISR support to the active warfighters in the US Central Command's area of responsibility (AOR). Exasperated at what he said were people "stuck in old ways of doing business" and a lack of serious resolve that sought creative solutions, Gates encouraged the consideration of low-cost,

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<sup>142</sup> Defense World, "US Sells 16 C27A Aircraft for \$32,000 after Paying \$500 Million for Them in 2012," 10 October 2014, accessed 10 December 2016, [http://www.defenseworld.net/news/11265/US\\_Sells\\_16\\_C\\_27A\\_Aircraft\\_For\\_32\\_000\\_After\\_Paying\\_500\\_Million\\_For\\_Them\\_In\\_2012#.WMLwCxiZORt](http://www.defenseworld.net/news/11265/US_Sells_16_C_27A_Aircraft_For_32_000_After_Paying_500_Million_For_Them_In_2012#.WMLwCxiZORt).

<sup>143</sup> Anthony W. Potts, USA and Roderick A. Bellows, "The Joint Cargo Aircraft (JCA)-Transfer of an Acquisition Category (ACAT) 1D Program to the U.S. Air Force USAF," *Army AL&T* (April-June 2010): 26-29, accessed 10 November 2016, [http://asc.army.mil/docs/pubs/alt/2010/2\\_AprMayJun/articles/26\\_The\\_Joint\\_Cargo\\_Aircraft\\_\(JCA\)--Transfer\\_of\\_an\\_Acquisition\\_Category\\_\(ACAT\)\\_1D\\_Program\\_to\\_the\\_U.S.\\_Air\\_Force\\_\(USAF\)\\_201002.pdf](http://asc.army.mil/docs/pubs/alt/2010/2_AprMayJun/articles/26_The_Joint_Cargo_Aircraft_(JCA)--Transfer_of_an_Acquisition_Category_(ACAT)_1D_Program_to_the_U.S._Air_Force_(USAF)_201002.pdf).

commercial off-the-shelf (COTS) capabilities to increase ISR.<sup>144</sup> Ultimately, the prompting from the SECDEF led to the USAF's development, procurement, and fielding of the MC-12W multi-intelligence platform in less than one year and, according to the official USAF fact sheet, "The MC-12 capability supports all aspects of the Air Force Irregular Warfare mission (counter insurgency, foreign internal defense and building partnership capacity)."<sup>145</sup> For a sustained period in Afghanistan, the MC-12W was the highest ops tempo unit within the Air Force Central AOR, with its utility and success highly applauded.<sup>146</sup>

Presumably, the USAF would continue to mature such a key and effective small wars capability. However, for a variety of valid reasons—but still reflecting the USAF's low institutional value of small wars—the active duty USAF completely divested itself of this capability starting in 2015 by shifting the MC-12W platform (and accompanying IW mission) to the Oklahoma Air National Guard (ANG). With the arrival of this asset and mission, the Oklahoma ANG became aligned with AFSOC, further disassociating IW-focused tactical ISR from mainstream USAF operations. Thus, the MC-12W joined the similarly developed and rapidly fielded U-28A as a member of AFSOC's Light Tactical Fixed Wing fleet that provides ISR in support of SOF missions.<sup>147</sup> Despite their utility and success, both of these ISR aircraft, associated crews, and integral processing, exploitation, and dissemination (PED) teams experienced growing pains in the development of becoming an effective combat system.<sup>148</sup>

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<sup>144</sup> Global Security, "MC-12W Liberty," accessed 15 November 2016, <http://www.globalsecurity.org/intell/systems/mc-12-liberty.htm>.

<sup>145</sup> US Air Force, "MC-12," 21 January 2016, accessed 5 December 2016, <http://www.af.mil/AboutUs/FactSheets/Display/tabid/224/Article/104497/mc-12.aspx>.

<sup>146</sup> The status of the MC-12W ops tempo in the AFCENT AOR was validated by a military decoration and performance report in which the author was the recipient.

<sup>147</sup> US Air Force, "U-28A," 15 March 2012, accessed 5 December 2016, <http://www.af.mil/AboutUs/FactSheets/Display/tabid/224/Article/104607/u-28a.aspx>.

<sup>148</sup> Steven J. Tittel, "Liberty and Lethality: Integrating MC-12W Liberty and Light Attack/Armed Reconnaissance Aircraft Operations" (Monograph, School of Advanced Military Studies, 2010), 29; the author also served as a MC-12W squadron lead trainer and chief of weapons and tactics in 2012-13.

ISR capabilities and integration will remain central to USAF efforts to increase its capacity to conduct small wars. Correspondingly, the USAF should conduct a thorough and comprehensive review on how to field, train, and maximize capabilities within this tactical ISR mission set. Both manned and unmanned platforms should be pursued, and this capability fielded beyond the limited scope of AFSOC. The lessons learned from the MC-12W and U-28A programs are numerous, and certainly will be applicable as the USAF pursues the procurement of a LAAR capability.

### Strike Capabilities

The history of the efforts to develop and field a LAAR asset shares much of the checkered past of the LiMA and MC-12W programs, with all three having some affiliation with the 2008 USAF Tiger Team that identified significant gaps in IW and BPC capabilities.<sup>149</sup> In a series of budget actions, tests, studies, legal contests, and sometimes competing Service goals, the entire DoD has allocated in excess of \$500 billion dollars to this project to field a “responsive close air support” and “expeditionary ISR support” capability useful for SOF, BPC and other IW missions, yet the United States has no actual LAAR capability.<sup>150</sup> Instead, the majority of those funds are for the Afghan Air Force’s A-29 Light Air Support (LAS) aircraft, with only multiple previous and currently planned ‘tests’ and ‘demonstrations’ for a US LAAR capability.

Though it is fortunate that the LAAR did not suffer the same fate as the JCA of being procured and immediately benched, the outcome is still the same; the US military does not currently have this critically needed small wars capability. As shown in the graph in figure 12 (next page), the need for CAS assets in Afghanistan increased nearly 600% during the so-called stability ops (read, small wars) phase of OEF from 2004 to 2010. Yet, when reviewing the actual

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<sup>149</sup> Michael Pietrucha, “A Brief History of Recent Light Attack,” e-mail to author, 12 March 2017.

<sup>150</sup> Pietrucha, “A Brief History of Recent Light Attack.”



employment data for these missions, more than 90% of the time these aircraft did little more than provide armed overwatch with zero expenditure of munitions.<sup>151</sup>

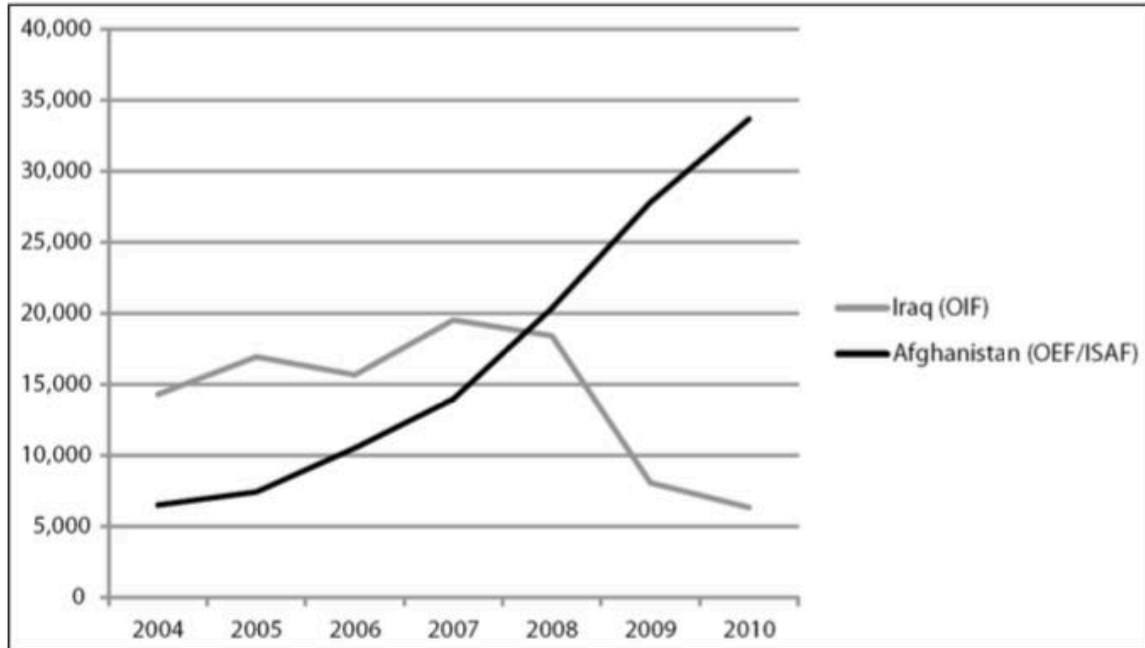


Figure 12. US close air support sorties, Afghanistan and Iraq, 2004–10.

Source: Dag Henriksen, ed., *Airpower in Afghanistan 2005-10: The Air Commanders' Perspectives* (Maxwell AFB, AL: Air University Press, Air Force Research Institute, 2014), 287.

This data does not at all suggest that these sorties were wasted, but rather illustrates the earlier point regarding the need to appropriately define types of airpower missions. Further, they show that savings on the magnitude of over one billion dollars could have been achieved if even half of these sorties were flown by a LAAR platform.<sup>152</sup> These savings would have certainly paid

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<sup>151</sup> US Air Force Central Command Combined Air and Space Operations Center, “Combined Forces Air Component Commander 2007-2012 Airpower Statistics, 31 December 2012, accessed 15 December 2016, <http://www.afcent.af.mil/Portals/82/Users/221/33/733/31%20DECEMBER%202012%20Airpower%20Stats%20Combined%20Operation%20Slidev2.pdf?ver=2016-05-04-025558-210>.

<sup>152</sup> This calculation is based upon an average fighter operating cost of \$12,000 per hour during 2004-10, replaced with a LAAR at an operating cost of \$1000. Sortie data gained from Alexa O’Brien, “AFCENT-CFAAC Airpower Summaries and Statistics, 2001 to Present,” accessed 22 March 2017, <http://alexaobrien.com/afcent-cfacc-airpower-summaries-and-statistics>; also see figure 5.

for the LAAR’s development, procurement, training, and other logistics many times over, as well as the multiple order effects of reduced stress on legacy fighter aircraft assets and personnel.<sup>153</sup>

If the astonishing fiscal data alone does not provide enough justification for the recommendation of the rapid fielding of a LAAR capability for US Armed Forces, the fact that the United States has flown in a permissive air environment for 99% of the time over the last 25-plus continuous years should convince any skeptic of this need (see figure 13). With recent calls to procure 200-300 LAAR assets, the USAF should get ahead of the power curve in terms of crew selection/training, logistical beddown requirements, and as a way to avoid litigation and accelerate the timeline, strongly consider a dual-buy.<sup>154</sup> The apparent imminent fielding of the LAAR warrants expanded discussion to propose how it fits into an operational construct for airpower in small wars.

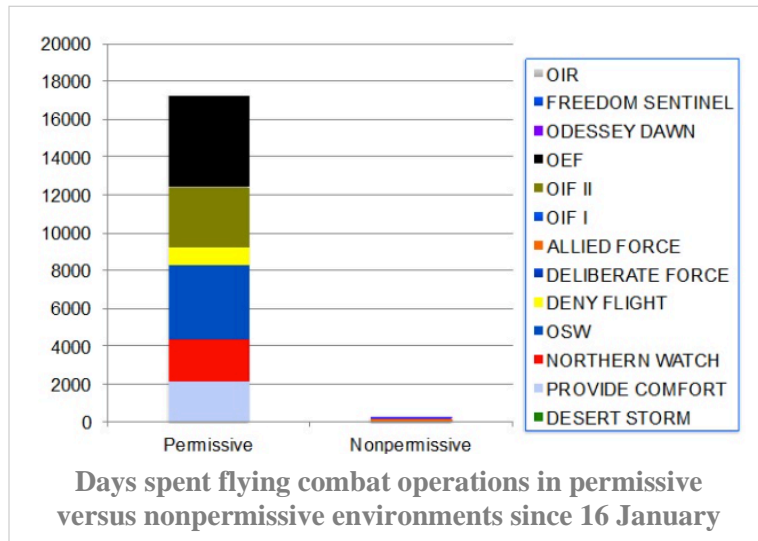


Figure 13. Air threat environment since 16 January 1991.

Source: Michael Pietrucha, “Air Superiority,” USAF Memo, 25 April 2017.

<sup>153</sup> The one billion dollar estimate is conservative and does not consider operations since 2010; previous studies indicate a total annual savings of over \$300 million by utilizing a LAAR, representing a savings of over four billion dollars from 2004 until today. See Steven J. Tittel, “Cost, Capability, and the Hunt for a Lightweight Ground Attack Aircraft” (Master’s thesis, Command and General Staff College, Fort Leavenworth, KS, 2009), 37-42; also see Brent R. Blake, “AT-6: The Best USAF Investment for the Long War” (Research Report. Air Command and Staff College, Maxwell AFB, AL, 2007), 11-13.

<sup>154</sup> McCain, 13.

Fielding of a LAAR provides the foundation for creating the proposed AGECC. The USAF should strongly consider initial basing of the LAAR at each of the three locations that correspond with the 93 AGOW and group HQ locations. Basing with the 93 AGOW HQ at Moody AFB, GA creates synergy with the existing A-10/CAS and A-29/BPC missions located there, as well as providing alignment as either a part of the 93 AGOW or 23rd Wing's Fighter Group. Next, basing a LAAR unit at Fort Hood, TX (Robert Gray Airfield) with 3 Air Support Operations Group (ASOG) provides an easily supportable and robust training opportunity with AGOW and Army units located there, at Fort Bliss, TX and Fort Sill, OK, the latter of which is home to the US Army Fires Center of Excellence. Finally, a LAAR unit located with 18 ASOG at Pope Army Airfield, NC would provide unique integration opportunities with SOF, who definitely will remain a critical participant in small wars.

As important as the training and integration by co-locating with 93 AGOW units are the benefits derived from effective and efficient manning solutions—not the least of which is providing enough air support for currency/training opportunities for Airmen qualified as Joint Terminal Attack Controllers (JTAC). JTAC-qualified (officer and enlisted) members from 93 AGOW could easily undergo training to be qualified to fly in the back seat of the LAAR.<sup>155</sup> Additionally, the AGOW already features rated aircrew who could more-easily transition to being qualified in the LAAR. The opportunity to fly while assigned as an Air Liaison Officer (ALO) was previously utilized in the A-10 community in the 1990s and re-implementation of this concept would substantially enhance morale and address the fighter pilot shortage 'crisis'.<sup>156</sup>

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<sup>155</sup> Benitez, Mike. "21st Century Forward Air Control: The Roots to Rebuild." War on the Rocks, 1 March 2017. Assessed 22 March 2017. <https://warontherocks.com/2017/03/21st-century-forward-air-control-the-roots-to-rebuild>.

<sup>156</sup> Thomas Manacapilli and Steven Buhrow, *Feasibility of an Air Liaison Officer Career Field: Improving the Theater Air-Ground System* (Santa Monica, CA: RAND Corporation, 2008), accessed 20 March 2017, [http://www.rand.org/content/dam/rand/pubs/monographs/2008/RAND\\_MG755.pdf](http://www.rand.org/content/dam/rand/pubs/monographs/2008/RAND_MG755.pdf), 60; Nathan Byrnes. "Air Force Faces Fighter Pilot Shortage," 20 January 2017, accessed 5 March 2017, <http://www.af.mil/News/ArticleDisplay/tabid/223/Article/1055113/air-force-faces-fighter-pilot-shortage.aspx>.

## Recommendations Summary – A Hope for Change

Creation of a comprehensive operational construct for airpower in small wars centers on the USAF's value of the mission, integration at all echelons of land power, and will produce multiple-order effects across the entire DoD. Significant improvements related to the USAF's responsibility to OT&E airpower capabilities will produce more effective and efficient employment of airpower in small wars. The recommendations detailed in this section provided "innovative and affordable ways to meet capability demands in permissive environments" associated with small wars. Hopefully, "after 25 years of continuous combat operations, (with) our Air Force in more demand than ever" that the changes presented here would be the impetus for a paradigm shift that addresses this dire situation.<sup>157</sup>

## Conclusion

This monograph presented the argument that small wars "requires a fundamentally different airpower approach than Major Combat Operations."<sup>158</sup> The Military Power Utilization (MPU) Model provided a method for exploring the details of the political, operational, and military factors of small wars, emphasizing the primacy of political factors, and the need for cohesion between all of these elements. Additionally, the term *small wars* was selected as an all-encompassing term to capture the unique characteristics of the phenomenon. With a brief review of airpower and historic vignettes of the Persian Gulf and Vietnam Wars, the foundation was set for the focus of this work: a specific roadmap to create a comprehensive, effective, and efficient operational construct for airpower in small wars.

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<sup>157</sup> US Air Force, "AF Invites Industry for Light Attack Platform Experiment," 20 March 2017, accessed 31 March 2017, <http://www.af.mil/News/ArticleDisplay/tabid/223/Article/1123613/af-invites-industry-for-light-attack-platform-experiment.aspx>.

<sup>158</sup> Anthony B. Carr, "America's Conditional Advantage: Airpower Counterinsurgency, and the Theory of John Warden" (Thesis, School of Advanced Air and Space Studies, 2009), 124.

Foregoing any previous constraints from dormant concepts and practices that prevent effectiveness in the twenty-first century, and building on ideas from multiple earlier efforts, this monograph provided a detailed explanation of how the USAF can transform its organization, training, and equipment to revolutionize the employment of airpower in small wars.<sup>159</sup> Two foundational themes should permeate all USAF improvement efforts: demonstrate institutional value for airpower in small wars, and truly integrate at all echelons of ground power employment. The *Air Force Future Operating Concept* and the CSAF Focus Efforts provide the initial starting points for instituting the necessary cultural change, but these documents lack the details to move the USAF in a positive direction. As stated by a modern airpower expert, “Air planners will no longer have the luxury of resolving theoretical debates by inclusion. They will have to choose one approach and reject another. As a result, we must identify, through a free competition of ideas, which theories of airpower will work and under what circumstances.” Thus, this monograph presented eight specific recommendations to ensure that airpower does not “continue to succumb to broad generalizations and dogmatic assumptions.”<sup>160</sup>

Beginning with the imperative to redefine the meaning of ‘airpower support’ and operationalize USAF squadrons by focusing them on C2 (vice administrative management), these changes to fundamental aspects of airpower employment set the foundation for inter-related improvements within the realm of OT&E. The proposed USAF Air-Ground Expeditionary Center (AGEC) functions as the overall center of excellence for airpower in small wars, responsible for the training and development of USAF, as well as Joint and Partner Nation Airmen. The AGEC brings unity of command and effort by consolidating multiple existing units, ensuring internal and external integration of all aspects of airpower, improving combat effectiveness, creating

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<sup>159</sup> Phillip S. Meilinger, ed. *The Paths of Heaven: The Evolution of Airpower Theory* (Maxwell AFB, AL: Air University Press, 1997), 36.

<sup>160</sup> Faber, “Competing Theories of Airpower.”

efficiency in operations, and otherwise providing an all-around positive contribution to airpower in small wars. Finally, the procurement of tailored equipment for mobility, ISR, and strike capabilities for small wars is encouraged, with the recognition the USAF is currently considering acquisition of a light attack/armed reconnaissance (LAAR) capability. Basing the LAAR with the wing and group headquarters of the 93 AGOW would have synergistic effects and would drastically increase the joint integration of airpower in small wars. Taken collectively, these recommendations produce a comprehensive operational construct for airpower in small wars.

Given the drastic challenges facing the USAF—from fiscal austerity, multiple internal stressors, to the unpredictable and wide array of threats—the organization is facing an unprecedented crisis and is in need of a paradigm shift. Fortunately, the new CSAF has indicated a seismic institutional change by stating “It may be time to refine and update two fundamental airpower principles we have relied on in the past for doctrinal thinking and planning. The first is the concept of *centralized control and decentralized execution*. . . . The second is the concept of high-low mix” (emphasis in original).<sup>161</sup> Changes of this magnitude, as well as implementation of the recommendations presented in this monograph, would affect the entirety of the USAF’s DOTMLPF-P military factors. Certainly, this is a daunting challenge, but the question must be asked if there is any other choice.

The persistent cries for the USAF to develop an institutional and universal theory of airpower in small wars have been growing since the Vietnam War and have been steadily increasing since the tragedy of 9/11. The insights from over 30 years ago are just as true today as it was then: “If the Air Force is to be an effective instrument of national power in low-intensity conflict, it must recognize the peculiar difficulties of war at the lower reaches of the conflict spectrum and commit a modest portion of its intellectual and material resources to building a low-

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<sup>161</sup> Gen David Goldfein, CSAF, “CSAF Intent: A Dialogue About Joint Warfighting Excellence,” September 2016, 7.

intensity capability.”<sup>162</sup> Though the words and recommendations of this monograph are just one in the chorus calling for change, one can still have faith that the USAF will recognize that the time is now to develop and institute a holistic vision for airpower in small wars.

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<sup>162</sup> Dean, 105.

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