

## IS AIRPOWER RELEVANT IN A COIN FIGHT?

BY

LIEUTENANT COLONEL JEFFREY M. SMITH  
United States Air Force

### DISTRIBUTION STATEMENT A:

Approved for Public Release.  
Distribution is Unlimited.

USAWC CLASS OF 2010

This SRP is submitted in partial fulfillment of the requirements of the Master of Strategic Studies Degree. The views expressed in this student academic research paper are those of the author and do not reflect the official policy or position of the Department of the Army, Department of Defense, or the U.S. Government.



U.S. Army War College, Carlisle Barracks, PA 17013-5050

# Report Documentation Page

*Form Approved*  
*OMB No. 0704-0188*

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE <b>30 MAR 2010</b>	2. REPORT TYPE	3. DATES COVERED			
4. TITLE AND SUBTITLE <b>Is Airpower Relevant in a COIN Fight?</b>		5a. CONTRACT NUMBER			
		5b. GRANT NUMBER			
		5c. PROGRAM ELEMENT NUMBER			
6. AUTHOR(S) <b>Jeffrey Smith</b>		5d. PROJECT NUMBER			
		5e. TASK NUMBER			
		5f. WORK UNIT NUMBER			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>U.S. Army War College ,122 Forbes Ave.,Carlisle,PA,17013-5220</b>		8. PERFORMING ORGANIZATION REPORT NUMBER			
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S)			
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)			
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited.</b>					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT <b>see attached</b>					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES <b>38</b>	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			

The U.S. Army War College is accredited by the Commission on Higher Education of the Middle State Association of Colleges and Schools, 3624 Market Street, Philadelphia, PA 19104, (215) 662-5606. The Commission on Higher Education is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation.

# **PROPERTY OF U.S. ARMY**

USAWC STRATEGY RESEARCH PROJECT

## **IS AIRPOWER RELEVANT IN A COIN FIGHT?**

by

Lieutenant Colonel Jeffrey M. Smith  
United States Air Force

Colonel Murray R. Clark  
Project Adviser

This SRP is submitted in partial fulfillment of the requirements of the Master of Strategic Studies Degree. The U.S. Army War College is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools, 3624 Market Street, Philadelphia, PA 19104, (215) 662-5606. The Commission on Higher Education is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation.

The views expressed in this student academic research paper are those of the author and do not reflect the official policy or position of the Department of the Army, Department of Defense, or the U.S. Government.

U.S. Army War College  
CARLISLE BARRACKS, PENNSYLVANIA 17013

## **ABSTRACT**

**AUTHOR:** Lieutenant Colonel Jeffrey M. Smith

**TITLE:** Is Airpower Relevant In a COIN Fight?

**FORMAT:** Strategy Research Project

**DATE:** 17 March 2010      **WORD COUNT:** 7,563      **PAGES:** 38

**KEY TERMS:** JP 3-24, Afghanistan, Iraq, Operation ENDURING FREEDOM, Operation IRAQI FREEDOM, Airstrikes, Air Superiority, Space Superiority, Cyberspace, Command and Control, Intelligence Surveillance and Reconnaissance, Global Precision Attack, Special Operations, Air Mobility, Personnel Recovery, Agile Combat Support, and Building Partnerships

**CLASSIFICATION:** Unclassified

Joint Publication 3-24, COIN is an outstanding publication incorporating historical counterinsurgency lessons. However, in its current form, JP 3-24 has captured only a portion of the total joint effort. The doctrine writers dedicated only 4 of 238 pages to airpower's use in a counterinsurgency (COIN) fight. In reality, the combatant commander is employing 32,000 Airmen in the AOR, and thousands more in reachback capacity, in all but one of the Air Forces' twelve core functions. Before DoD forgets the contributions airpower made during OIF and OEF, the Air Force needs to capture its contributions to the COIN fight, formulate its own dedicated COIN doctrine, and then re-engage with the Joint Staff to ensure JP 3-24 captures airpower's hard won contributions.

## IS AIRPOWER RELEVANT IN A COIN FIGHT?

It is imperative, however, that Airmen avoid—at all costs—creating the impression that they are advocating a counterinsurgency solution that involves Airmen or airpower for their own sake.<sup>1</sup>

—Major General Charles J. Dunlap, Jr.

Joint Publication (JP) 3-24 (Counterinsurgency Operations) appropriately but incompletely incorporates historical lessons from previous counterinsurgency (COIN) experiences. JP 3-24 authors pulled from numerous historical examples in order to better serve the Joint force. JP 3-24 does not need to be a yearbook capturing every American contribution; however, if this manual intends to codify the “joint” effort to a COIN fight, then the current version requires additional examples. This paper highlights omissions in the recently published JP 3-24 from COIN operations currently underway in Iraq and Afghanistan.

The current version of JP 3-24 dedicates only 4 of 249 pages to airpower. This brevity, coupled with the perception of airpower’s inappropriateness for the sensitive work of COIN, inadvertently diminishes airpower as an essential element in the joint fight. Although airpower supports ground forces, this level of inattention may place our forces at risk--forces that are fighting today and forces who will reach for this manual a generation from now. This paper highlights airpower’s contributions to the COIN fight in order to keep future forces from learning outdated lessons.

### Concerns with JP 3-24

In the pages dedicated to airpower, JP 3-24 briefly covers air command and control, mobility, interoperability between ground and air, personnel recovery operations, basing, and building host-nation airpower capability.<sup>2</sup> Although pertinent

topics, each brief paragraph insufficiently covers past airpower contributions and especially ignores today's successes. Thirty-two thousand Airmen are performing critical functions in the COIN fight which JP 3-24 fails to codify.<sup>3</sup> If the reader accepts the first sentence of JP 3-24, then the rest of the publication falls short of its mandate.

(JP 3-24) It sets forth joint doctrine to govern the activities and performance of the Armed Forces of the United States in joint operations and provides the doctrinal basis for interagency coordination and for US military involvement in multinational operations. It provides military guidance for the exercise of authority by combatant commanders and other joint force commanders and prescribes joint doctrine for operations, education, and training.<sup>4</sup>

Similarly, a search for the word "airpower" in the US Government Counterinsurgency Guide also produced zero results. The official US Government manual on COIN incorporates lessons from the Army Field Manual (FM) 3-24, Marine Corps Warfighting Publication 3-33.5, and JP 3-24, but apparently dismisses airpower as a contributor.<sup>5</sup> In 2007, the Air Force tried to codify doctrine in a broader document called Air Force Doctrine Document (AFDD) 2-3, Irregular Warfare. Although AFDD 2-3 addresses the broader topic, even the Secretary of Defense highlighted its shortfalls.

Furthermore, the counterinsurgency manual issued by the Army and Marines is over 200-pages long--and yet only four pages are dedicated to air, space, and cyberspace. Not long ago, the Air Force published a doctrine document on irregular warfare. But, as future leaders of airpower, you should consider whether there is more the service might do to articulate and codify the unique role of airpower in stability operations.<sup>6</sup>

Failure to properly account for and document airpower's contribution to the COIN fight ensures the continued misuse or under use of airpower. Colin S. Gray captures the issue by stating:

Two facts provide the highly plausible basis for the fallacious belief that airpower can only be a minor player in COIN. First, it is the case that COIN must principally be a political venture--so airpower is at a discount simply because it is a military tool. Second, airpower is a military tool

inherently incapable of engaging 'up close and personal' with enemies and actual and potential allies amongst the people on the ground. In combination, these twin blows suffice to make a potent generic claim for airpower's minor status in COIN.<sup>7</sup>

To clarify these misunderstandings, in 2008 Phillip S. Meilinger wrote an article correcting common misperceptions about airpower. He states the world still associates airpower to the massive fires in Dresden, Tokyo and Hiroshima due to aerial bombing. Despite this destruction, he also states when analysts tallied the final civilian casualty numbers from aerial bombardment and compared them to the total number of deaths in World War II, they discovered airpower produced less than 5 percent of all deaths. Although most consider 5 percent a significant number, airpower served as a surprisingly discriminate weapon when compared to other forms of ground warfare.<sup>8</sup> As technology advances airpower capability, the precision of aerial weapons continues to increase, resulting in even lower percentages of civilian casualties, as compared to deaths from ground warfare. This is not an attempt to minimize any civilian casualty; however, whether one uses numbers from non-governmental organizations or official government data, the number of civilian deaths due to airstrikes declined significantly from Operation DESERT STORM, through Bosnia, Kosovo and to today.

The exception to this trend occurred the first two years of Operation IRAQI FREEDOM (OIF), during which the civilian casualty rate from airstrikes rose from the traditional 5 percent to 11.3 percent of all civilians killed in combat.<sup>9</sup> A Human Rights Watch analysis of casualties during this period indicated preplanned airstrikes had "minimal adverse effects to the civilian population" but airstrikes on pop-up targets continue to cause civilian casualties.<sup>10</sup> These pop-up targets arose as Airmen responded to ground forces' calls for immediate air support. Although targeting

protocols produced a near-perfect record in executing pre-planned strikes, Airmen bypassed these time-intensive protocols in order to offer immediate relief to soldiers under enemy fire. In 2006 and 2007, airpower achieved a near-perfect record in pre-planned strikes. In prosecuting airstrikes against pop-up targets, Airmen lowered civilian casualties from airstrikes to 2.6 percent in Iraq and 0.65 percent in Afghanistan by finding creative ways to compress the time required to apply the casualty-saving protocols used in pre-planned strikes.<sup>11</sup> Through process improvements, the Air Force reduced response times from 30 minutes to 7 minutes, while still incorporating the safer protocols used in pre-planned airstrikes. Technology enabled airpower to meet the divergent goals of providing urgent support to ground forces, while striving towards the theater commander requirement of zero collateral damage.

With airpower producing minimal collateral damage, as compared to other forms of military power, it seems inappropriate for JP 3-24 doctrine writers to ignore the contributions of airpower. Several airpower authors highlight this shortfall. In 2008, Philip S. Meillinger stated, "If our intent is to reduce the risk to ourselves and to civilians on the ground, then we should look more closely at the weapon that has proven time and again to be the most discriminate and humane form of warfare: air power."<sup>12</sup> As doctrine writers incorporated FM 3-24 into JP 3-24, they also carried forward the Army's misperception of airpower causing the greatest number of civilian casualties--language not offered towards other forms of ground warfare.<sup>13</sup> In addition to this comment Colonel Daniel Baltrusaitis (Ph.D.), Air War College Assistant Professor in *Flip side of COIN*, added, doctrine writers also need to capture the use of airpower in a COIN fight, as it "gives the US strategic 'staying power' by reducing the potential for US military

casualties, which erodes support for the COIN domestically.”<sup>14</sup> Finally, Major General Charles J. Dunlap Jr. points out in *Shortchanging the Joint Fight*, although JP 3-24 advanced US understanding of the COIN environment, it drew from many historical lessons where airpower was less precise and thus still recommends a very ground-force intensive approach.<sup>15</sup> “Unfortunately, the problem with over-reliance on historical case studies is that it breeds thinking that is frozen in time in terms of technology.”<sup>16</sup> To sum up their thoughts, airpower is more lethal today due to smaller munitions and greater precision. These advances now minimize collateral damage and provide a capability that did not exist in the 1960s. By not properly considering today’s technological advances, the new COIN manual draws the wrong conclusions from these historical lessons.

The overall concern pertains to ground forces that rely on an incomplete JP 3-24 to conduct COIN operations. Never availing soldiers to the capabilities of airpower produces solutions that may not be the most effective. Capturing this thought, Colonel Howard D. Belote in *Counterinsurgency Airpower* wrote about an air support operations group commander who interviewed several Army officers in the AOR. He highlighted how these tactical commanders grew up not trusting close air support (CAS).<sup>17</sup> Every time the Army had an exercise, commanders found it too hard to integrate airpower into the scenario, so they solved their wargame scenarios without airpower. Fortunately, once in combat, these same Army commanders gained a new understanding of how CAS positively supports their operations.<sup>18</sup>

As Colonel Michael Formica,...Commander of Black Jack Brigade, explained, “In my first few months in country, I rarely put air into my plan--this was because we did not understand how it could assist us in a

counterinsurgency fight--then I saw the incredible results in Fallujah and in our follow-on operations.<sup>19</sup>

This paper does not advocate for an airpower-only approach to COIN, but with FM 3-24 advocating for restraints on airpower, and JP 3-24 never addressing airpower's precision and successes, doctrine writers never presented the most effective solutions. Technological advances over the last 20 years created tools that possess a precision that did not exist in the mid-twentieth century COIN fights. In addition to precision, airpower now further enhances COIN operations through nearly all its core competencies. Given a persistent lack of understanding of airpower's usefulness, the Air Force needs to educate the joint force on its utility, particularly when the nation conducts a COIN fight. As an important first step, doctrine writers need to capture these lessons in JP 3-24 so US forces can benefit from all the nation's capabilities.

### AF Core Functions

In just four pages, the JP 3-24 authors tried to capture some airpower contributions. If airpower offers so little to the COIN fight in Iraq and Afghanistan, then one should find it odd the combatant commander uses nearly every Air Force core function (eleven of twelve). Nuclear deterrence operations serve as the only core function not utilized in COIN. In fact, when one sees how these core functions enable the COIN fight, the contribution of airpower to the joint cause becomes clear.

*Air Superiority.* Without air superiority, the Airmen would struggle to support the COIN fight with its other core competencies, thus air superiority enables every other core function. In Operation ENDURING FREEDOM (OEF), as the fight turned into an insurgency, US aircraft flew 19,000 CAS sorties in 2008.<sup>20</sup> In 2009, US aircraft nearly doubled 2008 CAS sorties.<sup>21</sup> In COIN, US forces achieve maximum effectiveness when

they dismount from armored vehicles and intermingle with the local population. Michael W. Isherwood in *Airpower for Hybrid War* states, "This fact often dictates foot patrols to provide presence and to build relationships with businessmen, village leaders, and the people on the street."<sup>22</sup> Lieutenant General Allen G. Peck in *Airpower's Crucial Role in Irregular Warfare* builds on these thoughts by stating, air superiority, coupled with precision engagement and command and control, provides US ground forces confidence to interact with the local populace. "Highly accurate guidance systems, cockpit selectable fuses, and munitions of various explosive yields allow Airmen to deliver intended effects precisely while limiting unintended effects."<sup>23</sup> This gives US forces and local government greater credibility and ability to ensure peace and stability from insurgents.

From the beginning of OEF through today, airpower enjoys unhindered freedom of action to support friendly forces. With January 1, 2010 serving as a typical day, enemy personnel in the Asmar District of Afghanistan approached friendly forces; a F-15E Strike Eagle responded and dropped a precision-guided munition (PGM) eliminating the threat.<sup>24</sup> In the Chahar Bagh District, an MQ-9A Reaper "Observed enemy forces fire on the patrol, released a missile against the enemy fighting position, and destroyed it. Later, friendly forces reported taking more enemy fire and another missile was fired on the new enemy fighting position."<sup>25</sup> In the Musa Qala District, a convoy began taking accurate enemy fire so an A-10 strafed the area, but had to return when a battle-damage assessment team took new fire.<sup>26</sup> When the show-of-force by the A-10 did not work, it strafed the position again until the enemy fire ceased.<sup>27</sup> In the Ghazni District, with a convoy taking fire, soldiers requested a show-of-force to cover

the medical evacuation (MEDEVAC).<sup>28</sup> The show-of-force was successful and the convoy continued to its destination. In addition to these measures, Airmen successfully conducted several more show-of-force demonstrations, which deterred enemy activity.<sup>29</sup> In all, under the assurance of air superiority, the lethality and constant presence of airpower allows US forces the freedom of action to support ground operations.

*Space Superiority.* Like air superiority, but even more invisible, the US maintains space superiority, which positively affects COIN operations on a daily basis. General Peck also highlights the difficulty in touting space when he states, “Space-based assets rank among the least understood and recognized of the Air Force’s war-fighting contributions.”<sup>30</sup> These space assets provide intelligence, communications, weather and precision navigation capabilities that support CAS, MEDEVACs and targeting, which in turn facilitate key aspects of the COIN operation.

*Cyberspace Superiority.* Much of what airpower accomplishes relies on cyberspace superiority. The data relayed to ground commanders provides the situational awareness and intelligence to make combat decisions. Even when insurgents have the upper hand, the communications flow between intelligence, surveillance, and reconnaissance (ISR) assets and the warfighter gives US forces the initiative to move faster than the enemy can react. In one example, Objective Gateway allows soldiers to communicate via a high-altitude communication repeater node on the RQ-4 Global Hawk. Where mountainous terrain normally hampers ground forces by line of sight communications, Global Hawk, in addition to its ISR mission, now doubles as a network relay between ground forces.<sup>31</sup> Traditionally, information from ISR assets stalled at major C2 nodes. Once equipped with Heterogeneous Airborne

Reconnaissance Team systems and a notebook computer, soldiers pull data from ISR assets providing unprecedented battlefield awareness.<sup>32</sup> In the past, air operation centers (AOCs) represented the hallmark of cyberspace prowess, but today's joint terminal attack controllers (JTACs), armed with a remotely operated video enhanced receiver (ROVER) system, can share videos with CAS pilots, further minimizing collateral damage. By exploiting cyberspace superiority, "The average response time to troops-in-contact (TIC) requests...has fallen to seven minutes or less."<sup>33</sup> The ability to share ISR data in cyberspace provides air and ground forces an unprecedented advantage.

*Command and Control.* The AOCs and airborne warning and control systems (AWACs) remain classic airpower C2 nodes where these assets enable situational awareness to direct tactical engagements. In COIN, the C2 nodes reside with the ground forces, thus air and ground forces have re-learned tough lessons regarding the integration of their assets. To enhance air/ground coordination, air support operations centers (ASOCs) co-locate with Army tactical headquarters.<sup>34</sup> In order to address a point of frustration between airpower and ground forces, the Air Force instituted several measures to streamline airpower's responsiveness. As a result, when soldiers call for air support, ASOC Airmen can identify the location and threats within seconds, select the most appropriate airframe and link the pilot to the JTAC who commence detailed coordination via ROVER.<sup>35</sup> The ASOC strives for CAS aircraft to respond within a minute-and-a-half after notification.<sup>36</sup> Furthering airpower's responsiveness to ground forces, the US continually upgrades its communications equipment. In fact, a JTAC on his sixth deployment since 2002 stated his "Primary method of communication has

changed almost every year. Strikes were first coordinated by radio, then secure Internet 'chat,' then moving digital maps, which are now enabled by Humvee-mounted communications systems."<sup>37</sup>

Another new C2 development involves the employment of an airborne communications system, called Battlefield Airborne Communications Node (BACN) which incredibly links disparate frequency spectrums. Now, "A convoy commander on a frequency-limited radio can talk with a supporting CAS pilot on a different frequency by using BACN."<sup>38</sup> This system links "VHF-FM, VHF-AM, UHF-AM, UHF-SATCOM, (Single-Channel Ground And Airborne Radio System) SINCGARS, HaveQuick I/II, Situation Awareness Data Link (SADL), Enhanced Position Location Reporting System (EPLRS), Link 16 and common data link terminals...through a central computer called the gateway manager."<sup>39</sup> This unrivaled airborne communications system "enhanced our warfighters' combat effectiveness and capability to stop the adversary, while saving countless lives of our troops and allied forces."<sup>40</sup>

*Global Integrated ISR.* Through employment of unmanned aerial vehicles (UAVs) and recent developments in Joint Surveillance Target Attack Radar System (JSTARS), rapid procurement of Project Liberty, and the use of strategic bombers in performing reconnaissance missions, the Air Force has made unprecedented advances in ISR. Creating a constant gaze, called wide-area surveillance (WAS), Predators, Reapers, U-2s, Global Hawks, RC-135s, JSTARs, and newly-fielded MC-12s produce many forms of imagery US forces use to track insurgents. Airmen then share these electro-optical (EO), infrared (IR) imagery, full-motion video (FMV) signals, and ground moving target indicators (GMTI) with ground commanders who exploit the information

while Airmen use it to perform precision strikes.<sup>41</sup> Where Army surveillance systems only transmit signals for seven miles, RC-135s at 30,000 feet can detect signals approaching 250 miles away, and U-2s and Global Hawks monitor 284,000 square miles from their perches twice as high.<sup>42</sup> These persistent systems offer unmatched situational awareness to the COIN effort.

Given the increasing number and capability of ISR assets, the Air Force exploits these tools producing actionable information. Michael W. Isherwood in *Airpower for Hybrid War* highlights an ISR success story by detailing the efforts leading to the airstrike on Abu Musab al-Zarqawi. “Initially tipped by a human intelligence source, reinforced by a SIGINT intercept, and then tracked through more than 600 hours by airborne ISR, the collage of data allowed a F-16 with a LITENING pod to zero in for the attack.”<sup>43</sup> Major General Charles J. Dunlap, Jr. in *Making Revolutionary Change* provides another example.

The Air Force recently watched one man in Iraq for more than five weeks, carefully recording his habits--where he lives, works, and worships, and whom he meets...the military may decide to have such a man arrested, or to do nothing at all...or, at any moment they could decide to blow him to smithereens.<sup>44</sup>

Even JSTARS, designed at the end of the Cold War, provides a newfound niche. With its GMTI sensor and multiple communication links, the aircraft provides convoy overwatch and WAS coverage (19,000 square miles) of the battlespace.<sup>45</sup> Its multiple communication channels allow crews to share real-time indications to JTACs, special forces, command centers, and UAVs via Link 16 or one of thirty chat rooms.<sup>46</sup> “In an early 2007 experiment, analysts started pulling data from a night’s mission and sharing it with ground forces planning the next day’s operations.”<sup>47</sup> By focusing on individual dots adjacent to a previous day’s attack, analysts began discerning patterns of

insurgent behavior. With better intelligence on insurgent routes, tactics, and hideouts, COIN forces conducted follow-on missions by exploiting this new intelligence.<sup>48</sup>

Project Liberty ingeniously meets another insatiable ground force requirement. Using 37 MC-12W aircraft and their suites of EO/IR FMV sensors and MQ-9 SIGINT packages, sensor operators can send data to brigade operations centers and any JTAC with a laptop-based ROVER.<sup>49</sup> Although the Air Force just deployed MC-12Ws to the AOR a few months ago, they have already aided in the capture of many high-value individuals and have ensured friendly ground forces suffered zero casualties.<sup>50</sup> In fulfilling its COIN role, the MC-12W offers US forces an unmatched advantage and often disrupts the plans of the enemy before they strike, “saving the lives of American troops while sparing innocent civilians.”<sup>51</sup>

The SNIPER ATP system provides another example of how the Air Force exploits ISR and cyberspace superiority. The SNIPER pods provide essential non-traditional ISR using high-resolution, forward-looking IR and TV sensors, which transmit the signal to video equipment, such as ROVER, for rapid target coordination.<sup>52</sup> The pods, mounted on A-10s, F-15s, F-16s and B-1s, also gather aerial photos from pre-designated areas of interest, which intelligence personnel later analyze. Unlike older systems that require continual operator adjustment to center the target, once designated in the cockpit, the SNIPER pod tracks elusive moving targets with no additional intervention, increasing target accuracy while lowering cockpit workload.

As a result, ground commanders and their battlefield Airmen now have a plethora of real-time, high-resolution images and videos from the multitude of overhead assets. The best measure of effectiveness comes from “al Qaeda Ayman Al-Zawahiri and bin

Laden [who] have both been quite public this year in saying that they're under pressure and that they're under pressure from these attacks..."<sup>53</sup> With these airborne systems, US forces can un-obtrusively monitor and engage insurgents while sparing civilians. These capabilities make airpower accomplishments congruent with the concepts in JP 3-24, however, these feats remained uncodified by doctrine authors.

*Global Precision Attack.* Precision engagement was an essential core function at the start of OIF, but as US forces adopted a COIN focus, the ability to surgically attack a target, while preventing collateral damage to innocent civilians, gives US forces and local government greater credibility. Traditional LITENING Pods and the new SNIPER pods provide aircrews the unprecedented ability to find, track, and target tactical-sized targets.<sup>54</sup> Additional measures in minimizing collateral damage through smaller PGMs make air strikes even more pertinent in a COIN environment. Finally, the insurgents have also noted airpower's ability to surgically strike targets. Now a simple show-of-force maneuver can induce insurgents to alter their behavior, proving airpower can produce effects down to six inches...the size of an insurgent's mind.

As discussed earlier, the Air Force established a phenomenal record in conducting airstrikes on preplanned targets without harming civilians; however, in executing time-sensitive targets, airstrikes still produced civilian casualties. Mark Benjamin, a *Salon* reporter who wrote about efforts to reduce these strategically significant casualties, stated the Air Force now films

nearly every square foot of Iraq and Afghanistan. By overlaying two images of the same location taken from separate angles, and donning a pair of gray 3-D glasses, Airmen can quickly determine the size, height and precise location of nearby structures.<sup>55</sup>

These measures, coupled with real-time Predator feeds scanning a potential target for innocent civilians, allow Airmen to prevent collateral damage.<sup>56</sup> “The entire process--pulling up the 3-D satellite images, estimating possible civilian casualties, choosing weapons--can necessitate completion in less than 30 minutes.”<sup>57</sup>

In order to reduce the blast radius of munitions, particularly in urban settings, the Air Force adopted several techniques. The Air Force took its 200-pound bomb, pulled out most of the explosive material, and backfilled the void with cement, essentially creating a 30-pound bomb. “The bombs have become so useful for narrowly targeted missions that two-thirds of the Air Force fighters now go up every day with this weapon nestled under the wings.”<sup>58</sup> Further reducing collateral damage, the Air Force now substitutes a composite material for steel casing, which restricts damage to 100 feet.<sup>59</sup>

In 2009, Mark Benjamin witnessed Airmen’s efforts to minimize civilian casualties:

The Air Force has developed other methods to control bomb damage. Pilots can now quickly alter the settings on a bomb to delay the detonation anywhere from 5 to 25 milliseconds. That change can cause the plummeting bomb to burrow deep into the earth before exploding. If five people are targeted by a 500-pound bomb with a five-millisecond delay--somebody will get up and walk away.<sup>60</sup>

Airpower’s ability to surgically strike individual targets produces a form of psychological warfare that allows the Air Force to influence people without ever dropping a bomb. One example involves Muqtada al-Sadr ordering his militias to stand down in light of airstrikes on his strongholds.<sup>61</sup> Precision airstrikes serve as one measure, but the use of low-flying jet noise also serves as a non-lethal reminder of airpower’s capabilities. Howard Belote in *Counterinsurgency Airpower* highlighted how the psychological effects of airpower saved lives and adhered to COIN concepts:

One notable situation occurred in Baghdad in November 2004, as the battle for Fallujah raged just a few miles to the west, when a convoy

stopped to deal with a large improvised explosive device just outside a Sunni mosque. Friday prayers had recently concluded, and a crowd estimated at well over 1,000 began marching from the mosque toward the convoy; the ground commander immediately declared a TIC and had the JTAC request a low and loud show of force. The ASOC and division TACP [tactical air control party] coordinated with the Army's air command and control for passes well below the coordinating altitude--and after the second low pass from a F-15E, the crowd dispersed, allowing the convoy to continue without incident.<sup>62</sup>

The Reaper, with a 16-hour loiter time carrying the equivalent payload of an A-10, can relentlessly pursue insurgents at zero risk to American soldiers.<sup>63</sup> Airpower's precision strike capability unnerves the fiercest of fighters. General Dunlap captured this point in *Making Revolutionary Change* stating, "As one Afghan told *The New York Times*, 'We pray to Allah that we have American soldiers to kill' but added pessimistically that 'these bombs from the sky we cannot fight.'"<sup>64</sup>

*Special Operations.* The Commander of Air Force Special Operations Command (AFSOC) wrote a recent article highlighting the similarities of special operations and the larger Air Force. AFSOC now possesses functions that mirror the larger Air Force including mobility, ISR, precision strike, agile combat support, command and control, and several more.<sup>65</sup> In pre-COIN measures, the 6th Special Operations Squadron fosters relationships to "allow access, presence, persistence, and influence in regions that might otherwise fall prey to insurgent groups."<sup>66</sup> The command also conducts ISR with their own Predators and Reapers, performs precision engagement via its gunships, and offers care with its medical teams.<sup>67</sup>

*Rapid Global Mobility.* Rapid Global Mobility provides airlift and supplies for ground forces, serves as an anti-improvised explosive device (IED) strategy, and through pivotal air refueling support, ensures the loiter time for ISR, CAS, and strike assets monitoring insurgent operations. In the winter of 2009-2010, the military geared

up for another troop surge. Although this presented many challenges, Air Mobility Command (AMC), had already supported a 17,000-troop surge earlier in the year while handling on-going transportation requirements.<sup>68</sup> In 2008, during OIF and OEF, the Air Force flew 50,000 airlift sorties, transporting over one million personnel and 90,000 pallets of cargo that otherwise would have moved via slower, more vulnerable ground-based means of transportation.<sup>69</sup> In addition to supporting the ground forces, Airmen can bolster the image and legitimacy of the local government through airdrops to remote civilian communities. In a classic COIN-support measure to bolster government credibility, “During the Afghan winter of 2008-2009, nearly 40 percent of all airdrops were humanitarian missions—delivering rice, water, firewood, and blankets to isolated villagers.”<sup>70</sup>

Airlift not only provides maneuverability within the AOR, but in its third dimension, offers COIN forces supplies, troop movement and casualty evacuation, without exposing soldiers to constant IED threats. Airlift serves as a superb counter-IED process allowing friendly forces to avoid the most notorious roads. With insurgents planting 900 IEDs each month in Iraq and Afghanistan, these airlift missions mitigated the insurgent threat while protecting America’s sons and daughters.<sup>71</sup>

Airmen also embrace a new airdrop system called Joint Precision Airdrop System (JPADS). JPADS is a satellite-guided parachute that provides airlifters the same precision PGMs provide to strike aircraft. Where traditional airdrops require C-130s to fly in mountainous valleys, JPADS enables airdrops from 25,000 feet, well above small arms fire and AAA, and permits accuracies better than traditional airdrops.<sup>72</sup> Now crews do not have to see the drop zone, which ensures resupply even

at night or in inclement weather.<sup>73</sup> Not only does this enhance aircrew survivability, but it also minimizes exposure of ground troops and makes available smaller and more numerous drop zones supporting COIN operations.

In 2009, Air Force air refueling tankers offloaded 1 billion pounds of fuel to receiver aircraft, which enabled air superiority, global precision attack, special operations and ISR capabilities, sometimes all on the same air refueling mission.<sup>74</sup>

Overall, rapid global mobility promotes the government's credibility and improves the quality of life for its population despite Afghanistan's unforgiving terrain.<sup>75</sup>

*Personnel Recovery.* The Air Force traditionally referred to this function as CSAR, but recently relabeled it "personnel recovery" to denote its combat mission and capability.<sup>76</sup> In COIN, US ground forces dismount from armored vehicles, and assume greater risk of attack from insurgents. When these attacks occur, military leaders turn to Airmen to save life and limb. There are many examples, but one involves an injured lance corporal quickly whisked from Iraq to Texas via a single airlift mission. Although C-17s can fly long distances, multiple air refuelings allowed this Marine to receive eye-saving treatment at Brooke Army Medical Center less than thirty hours after the attack.<sup>77</sup> In a typical 3-month period, the 66th Expeditionary Rescue Squadron at Camp Bastion, Afghanistan, flew 620 missions saving 253 lives with 580 assists in the Fall of 2009.<sup>78</sup> The Air Force serves not only US soldiers, but also local civilians hurt by insurgent attacks; saving the life of a civilian gives US forces and the local government significant credibility.<sup>79</sup> "Saving the life of someone's child or spouse is 'one of the biggest rounds we can fire,' says Lieutenant General Gary North, the [former] top Air Force

Commander for the Middle East and Southwest Asia. 'That's a story they'll tell forever.'"<sup>80</sup>

*Agile Combat Support.* Agile combat support enables both the Air Force and the other services also operating in OEF. Contingency response groups (CRGs) and Air Force RED HORSE units first assess the usability of an airfield and then establish the initial logistics foothold. Once the 90-Airman team establishes routine operations, they typically hand over control to an air expeditionary group. This spring, CRG personnel at Shindand, Afghanistan, in typical form, restored the air traffic control tower, repaired the runway and installed airfield lighting to aid the growth of the Afghan National Army Air Corps (ANAAC).<sup>81</sup> CRGs now build partnership capacity, and in the case of Shindand, work with the ANAAC.<sup>82</sup> AF RED HORSE units also make airfields usable. RED HORSE engineers worked with soldiers in laying 700,000 square feet of matting to support an Army Combat Aviation Brigade.<sup>83</sup> There are also RED HORSE "detachments present at Bagram Air Base, Afghanistan and forward operating bases Tarin Khowt, Dwyer and Wolverine performing critical construction to develop a gravel-mix assault landing strip for C-130s and helipads for helicopters."<sup>84</sup>

Although many Airmen deploy to airfields throughout Afghanistan, many more routinely work in the countryside supporting explosive ordnance disposal (EOD) and provincial reconstruction teams (PRTs). Air Force EOD teams oversee "46 percent of the EOD missions in Afghanistan,"<sup>85</sup> where they support forward operating bases in eastern and southern Afghanistan and man a helicopter response team for Regional Command South.<sup>86</sup> In a 6-month rotation, one team responded to 300 incidents destroying 131,000 munitions.<sup>87</sup> "Of the dozen PRTs run by Americans, six are

commanded by Air Force officers.”<sup>88</sup> The Air Force deployed 240 Airmen throughout Afghanistan supporting PRTs who strive towards the essence of COIN, ensuring legitimacy of the Afghanistan government by building schools, roads, hospitals, and mentoring Afghan medics and local government officials.<sup>89</sup>

*Building Partnerships.* The newest Air Force core function involves building partnership capacity (BPC). The Air Force highlights the benefits of BPC in its irregular warfare strategy document as a strategic investment in partner nations’ strength and prosperity. AFDD 2-3 states leading a nation to formulate its own airpower “Bolsters all instruments of national power and provides visible, practical and effective means to consolidate governance and provide for the populace.”<sup>90</sup> BPC allows political leaders access to remote areas of their country, supports civil ground forces and police, strengthens security through airlift, ISR and many other key functions.<sup>91</sup>

Last year, Airmen assigned to the Combined Airpower Transition Force (CAPTF) guided the ANAAC through significant advancements. From a facility perspective, the ANAAC moved into a new \$183 million headquarters building at Kabul International Airport, consisting of two hangers, barracks, medical unit and classrooms.<sup>92</sup> The ANAAC possess 300 trained pilots, with an additional 2,000 support personnel, and have plans to grow to 7,400 Airmen by 2015.<sup>93</sup> In the fall of 2008, the “ANAAC flew 8,498 passengers, 102,000 kg of cargo, 789 sorties, and 98 [human remains recovery/medical evacuation] missions,” as well as their first presidential transport mission.<sup>94</sup> As of the fall of 2009, the ANAAC flew 90 percent of their own missions.<sup>95</sup> Indicating the feats the US Airmen overcame, the CAPTF Commander said, “Building

an air force while you are fighting a war is a little like building an airplane while you are trying to fly it.”<sup>96</sup>

With 32,000 Airmen in the AOR and the combatant commander utilizing nearly every Air Force core function, it appears JP 3-24 needs revision. Approaching this point from an opposite perspective, consider the ramification if these core functions ceased to exist due to lack of funding. Without, precision strike, ISR, C2, mobility, personnel recovery, plus other airpower benefits, one can make the argument the remaining ground forces would not be as effective. This reduced effectiveness would come at a cost to US ground forces, further exposing America’s center of gravity, while strengthening the cause of the insurgents. Again, the revised JP 3-24 does not need to be airpower centric, but if airpower makes this many contributions, then DoD needs to accurately codify the joint effort in the COIN fight.

#### What the Air Force Needs to Do

To ensure the US pursues effective COIN strategy, the Air Force needs to alter its approach in three areas. First, Airmen need to do a better job of touting their contributions. The Air Force needs to establish its own COIN doctrine. Finally, the Air Force needs to re-engage the Joint Staff to re-examine its approach to COIN currently codified in JP 3-24.

*AF Needs to Better Tout Its Contributions.* The biggest challenge of overcoming airpower’s perceived shortfalls in the COIN fight involves its lack of media exposure. Part of the problem entails the inability of airpower to tout its contributions. In light of JP 3-24 further ignoring airpower’s usefulness, it may be time to change this approach. Failure to capture airpower’s role may come at the demise of future generations

reaching back to doctrine to solve future challenges, only to realize, after loss of life and opportunity, the doctrine fell short of documenting all aspects of the joint fight.

Major General Dunlap writes to this issue when he captures Bill Arkin's March 2007 column, "Shock and Awe Worked, God Help Us."<sup>97</sup> His overall point highlighted ground forces caused more collateral damage than airpower, but reporters embedded with ground forces, experiencing the fight along with Soldiers and Marines, produced a sympathetic story given the greater context of the ground fight. With single seat cockpits unable to accommodate embedded reporters, the reporters could only cover the Iraqi ground perspective, which further built on WWII's perception of death and destruction.<sup>98</sup> Capturing the disconnect is Charles J. Dunlap Jr. stating, "In other words, the 'history' of an airpower civilian-casualty incident was often reported and recorded quite differently than those that were the result of landpower."<sup>99</sup>

Coupled with these misperceptions about airpower's effectiveness, many do not readily grasp the thousands of Airmen who contribute to the joint fight. In addition to traditional Air Force functions, Airmen fulfill many Army functions. In 2004, 2,000 Airmen guarded Iraqi prisons, ran convoys, photographed atrocities and served in a host of other critical ground positions for the over-worked Army.<sup>100</sup> "Since that time, ILO [in lieu of] requirements have increased over 300 percent, to over 8,000 [Airmen]."<sup>101</sup> Coupled with these in-theater assignments, 213,000 Airmen provide daily support to all combatant commanders in the form of reachback capability.<sup>102</sup> Furthermore, AMC launches one of its aircraft every 82 seconds supporting one of the combatant commands.<sup>103</sup> In support of OEF and OIF through July 2009, AMC Airmen have pumped over 10 billion pounds of fuel (same amount of water moved by Niagara Falls

every 30 minutes), conducted 135,000 patient movements and moved 12.75 million passengers.<sup>104</sup>

Even this last fall, airpower's support of an Army unit during a Taliban attack on Combat Outpost (COP) Keating went unnoticed, although the event was widely covered in the news.<sup>105</sup> "In hours of heavy fighting, the Taliban managed to penetrate the outpost's walls and overrun some buildings."<sup>106</sup> During the start of the battle, two F-15E Strike Eagles supported COP Keating while the Air Force launched four more F-15Es, plus bombers, to attack the Taliban assailants.<sup>107</sup> Aircraft remained overhead and as the fighting subsided, Air Force medical evacuation teams flew into action to evacuate the wounded.<sup>108</sup> As one officer said, "The Air Force's unwillingness to highlight its own life-saving actions perhaps reflect[s] an institution struggling with its identity."<sup>109</sup>

The Air Force fails to receive credit for all its contributions. Robert S. Day, Director of Irregular Warfare requirements for the Air Staff states, "These key enablers are so ubiquitous, and we do them habitually, we find [it] hard to even bring them up."<sup>110</sup> In today's budget allocation process, the extra attention devoted to ground force contributions creates monetary shortfalls in Air Force accounts. In 2007, the Pentagon transferred \$800 million dollars from Air Force operations and maintenance funds to pay for Army operational needs.<sup>111</sup>

The funds transfer clearly shows that the Secretary of Defense and other political leaders believe the Air Force's operational needs were not as significant as the Army and Marine Corps...The lack of understanding of the Air Force's impact on CENTCOM operations may adversely impact the Air Force's long run plans to recapitalize the fleet and develop Airmen.<sup>112</sup>

The Air Force needs to begin highlighting its contributions to the COIN fight. A daily review of the official Air Force website doesn't capture the Services wartime footing. On December 24, 2009, the websites top stories involved "AF honorees to

attend AETC Symposium Ball, Photo essay: Santa, friends welcome C-17, Kits help children cope with deployments, Ellsworth members support Angel Tree program and Leaders send holiday greetings.”<sup>113</sup> Perhaps some of these lead stories eventually tied to the war effort, but the Air Force still fails to capture the stories, which would significantly change perceptions. For example, the Air Force publishes a daily airpower summary about the events taking place in the CENTCOM AOR. A review of the summary from October 3, 2009, the reader would still not comprehend airpower’s contribution at COP Keating. On this day, the Air Force simply said, “Near Nuristan, Coalition aircraft provided critical and responsive airpower to friendly forces on the ground that were subjected to enemy attack.”<sup>114</sup> The daily totals of pounds transported, people moved and fuel pumped provides statistical information, but vignettes of Airmen successes with these inanimate objects represent where airpower needs to begin telling its story. The Air Force needs to remind the public the value they get from their Airmen and the contributions airpower makes to the daily fight.

*Codify Iraq and Afghanistan Lessons into AF Doctrine.* The Air Force needs a dedicated doctrine document on COIN. In 2007, the Air Force published Air Force Doctrine Document (AFDD) 2.3, Irregular Warfare. In this doctrine, the authors explain how COIN is a subpart of irregular warfare and airpower plays a role. Nevertheless, as a reader reviews its contents, the publication never captures the efforts the Air Force institutes in a COIN fight. It also fails to counter critical concerns of airpower’s heavy-handed, mass destruction reputation. Although it acknowledges air and ground coordination in two paragraphs, it flounders when it addresses Air Force efforts to embed and equip Airmen into Army units, other than to mention the need for the “right

mix.”<sup>115</sup> The four sentences dedicated to medical teams favors the broader IW subject to the extent the reader never learns the benefits to American’s internal CoG by preventing casualties or the good will gained by saving civilian lives in a COIN fight.<sup>116</sup> The huge accomplishments by in-theater air mobility and how airlift defeats IED threats only warrants one sentence of three paragraphs dedicated to mobility, and then vaguely highlights the successes.<sup>117</sup> The publication ignores several Air Force core functions, and fails to capture the ingenious accomplishments and the overall contribution of each function. A former Chief of Staff of the USAF captured the lack of expanded COIN guidance best when he wrote the forward to AFDD-1, Basic Doctrine.

As great operators we have preferred our ability to improvise over using sound repeatable principles. That’s no longer good enough--the complex integration required among our fighting elements, the complexity of joint and combined doctrine, and the uncertainty of rapidly developing contingency operations demand that our planning and employment be understood and repeatable. It requires that we learn and practice our own doctrine. We know how to do it right; we have taken the time to argue it out, write it down, and publish it. We must understand what it means to be an Airman and be able to articulate what air and space power can bring to the joint fight.<sup>118</sup>

The concern entails the Air Force traditionally forgets and then re-learns its COIN lessons. After the Vietnam conflict, the Air Force lost interest in COIN and deactivated its SOF unit in 1974, and with it, its cadre of forces specializing in COIN.<sup>119</sup> In fact, when documenting how the Air Force went about implementing COIN in Vietnam, Lieutenant Colonel David J. Dean wrote:

The importance of doctrine in this case must be stressed. A lack of doctrine and the short time between SAWC's [Special Air Warfare Center--a USAF unit in Vietnam tasked to implement COIN operations] inception and its first operations are the keys to the problem that resulted in the misuse of this special organization. The Special Air Warfare Center was entering a brand new field beyond any experience of the Air Force and most of the military. Entering the counterinsurgency arena without guidance encouraged the use of conventional air power tactics.<sup>120</sup>

The Air Force needs to codify its contributions in OIF and OEF and, in many cases, argue how airpower contributes to the COIN fight. Although JP 3-24 fails to capture airpower effectiveness, it remains inappropriate to ask the other Services or Joint Staff to incorporate airpower's inputs when the Air Force refuses to formally establish its own COIN doctrine.

*Change JP 3-24.* Once the Air Force creates its own COIN doctrine, they can begin to make the argument for incorporating airpower into JP 3-24. The authors of JP 3-24 did not sufficiently codify Airpower's contribution in the brief four pages dedicated to its use. Continued failure of doctrine writers to recognize airpower's contribution will produce the next generation's Operation Anaconda. Colonel Daniel Baltrusaitis (Ph.D.), Air War College Assistant Professor captured this point when he said,

It is not surprising after reading FM 3-24 that ground commanders fail to appreciate airpower's essential contributions to the COIN effort. The lack of sound operating concepts for integrating airpower into COIN doctrine has concrete consequences for the overall COIN effort. Strategically, the misunderstanding of the use of air assets let fleeing targets escape while increasing the danger to coalition ground forces.<sup>121</sup>

Just as the Army used FM 3-24 to advocate for larger ground forces (which DoD funded via Air Force accounts), failure to properly document airpower's contribution increases the risk airpower will be less responsive in tomorrow's fight.<sup>122</sup> With no document to reference, DoD budget analysts cannot legitimately advocate for a COIN-capable Air Force. Again, JP 3-24 need not serve as an OIF or OEF yearbook, but just as the Air Force failed to document its COIN efforts from Vietnam, DoD sets conditions for a slower and less effective responsive in the future. If we engage in a COIN conflict a generation from now, the reliance on incomplete doctrine increases risk to US soldiers

and innocent civilians, the same centers of gravity COIN doctrine recommends US commanders protect. Major General Dunlap sums up the urgency of correcting JP 3-24 when he writes,

Exploiting airpower in all its forms also does not mean that ground forces lose their relevance in any way. For the foreseeable future it is beyond debate that Soldiers and Marines will be absolutely irreplaceable elements to any successful COIN operation conducted by the US. In fact, the sheer “irreplaceable” aspect of the young Americans serving in those forces makes the drafting of joint doctrine so important. Absent the complete integration of the full capabilities of all four armed services in a genuinely joint and interdependent way, we unnecessarily put these brave American patriots at risk.<sup>123</sup>

### Conclusion

The authors of JP 3-24 did a superb job assembling COIN doctrine from historical examples. Due to the concepts contained in this manual, US forces redeploying from Iraq can claim success. However, the four pages dedicated to airpower fall short of capturing lessons learned from OIF and OEF and furthermore, do not account for airpower’s technological advances. Doctrine writers must codify the significant airpower effort used in concert with ground-force activities to achieve this success. By not documenting airpower’s contribution, future forces who reach for the COIN manual will commence operations without the benefits of today’s airpower enablers. Undoubtedly, these forces will eventually turn to airpower, but if the lack of doctrine leads to an ill-equipped Air Force or ineffective airpower response, the lives of American soldiers and innocent civilian could be lost. Before DoD forgets the contributions airpower made during OIF and OEF, the Air Force needs to capture and tout its contributions to the COIN fight, formulate its own COIN doctrine, and then re-engage with the Joint Staff to ensure JP 3-24 captures airpower’s hard won contributions.

## Endnotes

<sup>1</sup> Charles J. Dunlap, Jr., "Shortchanging the Joint Fight: An Airman's Assessment of FM 3-24 and the Case for Developing the Truly Joint COIN Doctrine," Air University Monograph, <http://aupress.maxwell.af.mil/121007dunlap.pdf> (accessed December 4, 2009).

<sup>2</sup> Joint Staff, Counterinsurgency Operations, Joint Publication 3-24 (Washington, DC: U.S. Joint Staff, October 5, 2009), VII-4-7.

<sup>3</sup> U.S. Department of the Air Force, "Air Force 101 Briefing," (Washington, DC: U.S. Department of the Air Force, December 18, 2009, version 33), <https://www.my.af.mil/gcss-af/USAF/ep/globalTab.do?channelPageId=s6925EC13506A0FB5E044080020E329A9> (accessed December 27, 2009), notes of slide 6.

<sup>4</sup> Joint Staff, Counterinsurgency Operations, Joint Publication 3-24, i.

<sup>5</sup> U.S. Government Interagency Counterinsurgency Initiative, "U.S. Government Counterinsurgency Guide," Washington, DC: U.S. Government Interagency Counterinsurgency Initiative, 2009, <http://www.state.gov/documents/organization/119629.pdf> (accessed December 4, 2009).

<sup>6</sup> Robert M. Gates, "Remarks to Air War College" (Maxwell Air Force Base, Ala.: Air University, 21 April 2008), <http://www.defenselink.mil/speeches/speech.aspx?speechid=1231> (accessed December 4, 2009).

<sup>7</sup> Colin S. Gray, "Understanding Airpower: Bonfire of the Fallacies," Strategic Studies Quarterly, Winter 2008, <http://www.au.af.mil/au/ssq/2008/Winter/gray.pdf> (accessed December 4, 2009).

<sup>8</sup> Phillip S. Meilinger, "Lowering Risk: Air Power Can Reduce Civilian Casualties," Armed Forces Journal, July 2009, <http://www.armedforcesjournal.com/2009/07/4079006/> (accessed December 4, 2009).

<sup>9</sup> Ibid.

<sup>10</sup> "Off Target: The Conduct of War and Civilian Casualties in Iraq," Human Rights Watch, December 2003, <http://www.hrw.org/reports/2003/usa1203/usa1203.pdf> (accessed December 4, 2009): 20.

<sup>11</sup> Phillip S. Meilinger, "Lowering Risk: Air Power Can Reduce Civilian Casualties."

<sup>12</sup> Ibid.

<sup>13</sup> Joint Staff, Counterinsurgency Operations, Joint Publication 3-24, VII-5.

<sup>14</sup> Daniel Baltrusaitis, "Airpower: The Flip Side of COIN," Georgetown Journal of International Affairs, Summer 2008, <http://journal.georgetown.edu/92/baltrusaitis.pdf> (accessed December 4, 2009): 89-96.

<sup>15</sup> Charles J. Dunlap, Jr., "Shortchanging the Joint Fight: An Airman's Assessment of FM 3-24 and the Case for Developing the Truly Joint COIN Doctrine."

<sup>16</sup> Charles J. Dunlap, Jr., "Collateral Damage and Counterinsurgency Doctrine," *Small Wars Journal*, 2008, <http://smallwarsjournal.com/blog/journal/docs-temp/43-dunlap.pdf> (accessed December 4, 2009).

<sup>17</sup> Howard D. Belote, "Counterinsurgency Airpower - Air-Ground Integration for the Long War," *Air & Space Power Journal*, Fall 2006, <http://www.airpower.maxwell.af.mil/airchronicles/apj/apj06/fal06/belote.html> (accessed December 4, 2009).

<sup>18</sup> Howard D. Belote, "Counterinsurgency Airpower - Air-Ground Integration for the Long War," *Air & Space Power Journal*, Fall 2006, <http://www.airpower.maxwell.af.mil/airchronicles/apj/apj06/fal06/belote.html> (accessed December 4, 2009).

<sup>19</sup> *Ibid.*

<sup>20</sup> Adam J. Hebert, "Spooling Up in Afghanistan," *Air Force Magazine*, October 2009, <http://www.airforce-magazine.com/MagazineArchive/Pages/2009/October%202009/1009afghanistan.aspx> (accessed December 4, 2009).

<sup>21</sup> *Ibid.*

<sup>22</sup> Michael W. Isherwood, "Airpower for Hybrid War," *Air Force Magazine*, October 2009, <http://www.airforce-magazine.com/MagazineArchive/Pages/2009/October%202009/1009hybrid.aspx> (accessed December 4, 2009).

<sup>23</sup> Allen G. Peck, "Airpower's Crucial Role in Irregular Warfare," *Air & Space Power Journal*, Maxwell AFB: Summer 2007. Volume 21, Issue 2, <http://www.airpower.maxwell.af.mil/airchronicles/apj/apj07/sum07/peck.html> (accessed 4 Dec 09).

<sup>24</sup> U.S. Department of the Air Force, "Dec. 31 Airpower Summary," January 1, 2010, <http://www.af.mil/news/story.asp?id=123184005> (accessed January 2, 2010).

<sup>25</sup> *Ibid.*

<sup>26</sup> *Ibid.*

<sup>27</sup> *Ibid.*

<sup>28</sup> *Ibid.*

<sup>29</sup> *Ibid.*

<sup>30</sup> Allen G Peck, "Airpower's Crucial Role in Irregular Warfare."

<sup>31</sup> Michael W. Isherwood, "Airpower for Hybrid War."

<sup>32</sup> *Ibid.*

<sup>33</sup> Charles J. Dunlap, Jr., "Collateral Damage and Counterinsurgency Doctrine."

<sup>34</sup> Adam J. Hebert, "Spooling Up in Afghanistan."

<sup>35</sup> Ibid.

<sup>36</sup> Ibid.

<sup>37</sup> Ibid.

<sup>38</sup> Chuck Paone, "ESC Officials Award Contract to Meet Urgent Need," June 25, 2009, <http://www.af.mil/news/story.asp?id=123155906> (accessed December 4, 2009).

<sup>39</sup> Ibid.

<sup>40</sup> Ibid.

<sup>41</sup> Michael W. Isherwood, "Airpower for Hybrid War."

<sup>42</sup> Ibid.

<sup>43</sup> Ibid.

<sup>44</sup> Charles J. Dunlap, Jr., "Making Revolutionary Change: Airpower in COIN Today," Parameters, Summer 2008, <http://www.carlisle.army.mil/usawc/parameters/08summer/dunlap.htm> (accessed December 4, 2009): 52-66.

<sup>45</sup> Rebecca Grant, "JSTARS Wars," Air Force Magazine, November 2009, <http://www.airforce-magazine.com/MagazineArchive/Pages/2009/November%202009/1109jstars.aspx> (accessed December 4, 2009).

<sup>46</sup> Ibid.

<sup>47</sup> Ibid.

<sup>48</sup> Ibid.

<sup>49</sup> Michael W. Isherwood, "Airpower for Hybrid War;" Michael Hoffman, "First MC-12Ws hit 300 combat missions in Iraq," Air Force Times, September 2, 2009, [http://www.airforcetimes.com/news/2009/09/airforce\\_gates\\_090109w/](http://www.airforcetimes.com/news/2009/09/airforce_gates_090109w/) (accessed December 4, 2009).

<sup>50</sup> Michael W. Isherwood, "Airpower for Hybrid War."

<sup>51</sup> Michael Hoffman, "First MC-12Ws hit 300 combat missions in Iraq."

<sup>52</sup> Lockheed Martin, "Sniper Advanced Targeting Pod," <http://www.lockheedmartin.com/products/Sniper/index.html> (accessed December 4, 2009).

<sup>53</sup> Bruce Riedel, "Afghanistan and Pakistan Indexes and Assessments," commentary, Washington, D.C., The Brookings Institution, October 5, 2009.

<sup>54</sup> Charles J. Dunlap, Jr., "Collateral Damage and Counterinsurgency Doctrine."

<sup>55</sup> Mark Benjamin, "Killing "Bubba" From The Skies," Salon, February 15, 2008, [http://www.salon.com/news/feature/2008/02/15/air\\_war/](http://www.salon.com/news/feature/2008/02/15/air_war/) (accessed December 4, 2009).

<sup>56</sup> Ibid.

<sup>57</sup> Ibid.

<sup>58</sup> Ibid.

<sup>59</sup> Charles J. Dunlap, Jr., "Shortchanging the Joint Fight: An Airman's Assessment of FM 3-24 and the Case for Developing the Truly Joint COIN Doctrine."

<sup>60</sup> Mark Benjamin, "Killing "Bubba" From The Skies."

<sup>61</sup> Charles J. Dunlap, Jr., "Making Revolutionary Change: Airpower in COIN Today."

<sup>62</sup> Howard D. Belote, "Counterinsurgency Airpower - Air-Ground Integration for the Long War."

<sup>63</sup> U.S. Department of the Air Force, "MQ-9 Reaper Factsheet," November 2009, <http://www.af.mil/information/factsheets/factsheet.asp?id=6405> (accessed December 4, 2009); Charles J. Dunlap, Jr., "Shortchanging the Joint Fight: An Airman's Assessment of FM 3-24 and the Case for Developing the Truly Joint COIN Doctrine."

<sup>64</sup> Charles J. Dunlap, Jr., "Making Revolutionary Change: Airpower in COIN Today;" Barry Bearak, "A Nation Challenged: Death On The Ground; U.S. Raid Kills Unknown Number in an Afghan Village," NY Times, October 13, 2001, <http://www.nytimes.com/2001/10/13/world/nation-challenged-death-ground-us-raid-kills-unknown-number-afghan-village.html> (accessed December 4, 2009).

<sup>65</sup> Donald C. Wurster, "Mastering the Art of the Possible: The Air Force Special Operations Command," Joint Forces Quarterly, First Quarter 2010, Issue 56, [http://www.ndu.edu/press/jfq\\_pages/editions/i56/11.pdf](http://www.ndu.edu/press/jfq_pages/editions/i56/11.pdf) (accessed January 2, 2009): 80-84.

<sup>66</sup> Ibid., 82.

<sup>67</sup> Ibid., 83.

<sup>68</sup> Scott T. Sturkol, "Mobility Airmen Continue Peak Pace for Operation Enduring Freedom," (Scott AFB, IL: Air Mobility Command Public Affairs, October 19, 2009) <http://www.af.mil/news/story.asp?id=123173329> (accessed December 4, 2009).

<sup>69</sup> Allen G Peck, "Airpower's Crucial Role in Irregular Warfare."

<sup>70</sup> Michael W. Isherwood, "Airpower for Hybrid War."

<sup>71</sup> Ibid.

<sup>72</sup> Tom Vanden Brook, "Smart' airdrops may save lives of U.S. troops," USA TODAY, August 1, 2007, [http://www.usatoday.com/news/world/iraq/2007-01-07-chute\\_x.htm](http://www.usatoday.com/news/world/iraq/2007-01-07-chute_x.htm) (accessed December 4, 2009).

<sup>73</sup> Ibid.

<sup>74</sup> “Combined Forces Air Component Commander Airpower Statistics,” US Air Forces Central Command Website, January 12, 2010, <http://www.afcent.af.mil/units/caoc/index.asp> (accessed January 12, 2010).

<sup>75</sup> Allen G Peck, “Airpower's Crucial Role in Irregular Warfare.”

<sup>76</sup> U.S. Department of the Air Force, “Air Force Doctrine Document 2-1.6: Personnel Recovery Operations,” (Washington, DC: U.S. Department of the Air Force, June 1, 2005) <http://www.e-publishing.af.mil/shared/media/epubs/AFDD2-1.6.pdf> (accessed December 4, 2009), ii.

<sup>77</sup> Michael W. Isherwood, “Airpower for Hybrid War.”

<sup>78</sup> Joseph Kapinos, “Squadron Highlights Capabilities During Afghan Rescue Mission,” Air Force.com website, December 15, 2009, <http://www.af.mil/news/story.asp?id=123182292> (accessed December 4, 2009).

<sup>79</sup> Daniel Baltrusaitis, “Airpower: The Flip Side of COIN.”

<sup>80</sup> Michael M. Phillips, “In Afghanistan, Mercy Missions Are a Part of War; MEDEVAC Helicopters Offer Villagers Services Taliban and al Qaeda Can't Match,” Wall Street Journal (Eastern edition), April 17, 2007: A.1, in ProQuest, (accessed December 4, 2009).

<sup>81</sup> Roger Drinnon, “AMC Contingency Response Airmen Build Future Afghan Pilot Training Base,” Air Mobility Command Public Affairs, December 11, 2009, <http://www.amc.af.mil/news/story.asp?id=123181818> (accessed December 4, 2009).

<sup>82</sup> Ibid.

<sup>83</sup> Zachary Wilson, “Red Horse serves as ‘backbone’ of Afghanistan construction,” July 6, 2009, [http://www.bagram.afcent.af.mil/news/story\\_print.asp?id=123152935](http://www.bagram.afcent.af.mil/news/story_print.asp?id=123152935) (accessed December 4, 2009).

<sup>84</sup> Ibid.

<sup>85</sup> Rachel Martinez, “Airmen Combat Explosive Threats in Afghanistan,” American Forces Press Service, December 16, 2008, <http://www.freerepublic.com/focus/f-news/2149843/posts> (accessed December 4, 2009).

<sup>86</sup> Ibid.

<sup>87</sup> Ibid.

<sup>88</sup> J.G. Buzanowski, “Panjshir PRT Proves 'Peace, Partnership, Progress' Possible,” September 28, 2009, <http://www.af.mil/news/story.asp?id=123169973> (accessed December 4, 2009).

<sup>89</sup> John J. Kruzal, "Air Force in Afghanistan aims high on low terrain," April 5, 2007, <http://www.af.mil/news/story.asp?id=123051909> (accessed December 4, 2009); J.G. Buzanowski, "Panjshir PRT Proves 'Peace, Partnership, Progress' Possible," and John J. Kruzal, "Air Force in Afghanistan aims high on low terrain."

<sup>90</sup> U.S. Department of the Air Force, *The 21st Century Air Force: Irregular Warfare Strategy*, (Washington, DC: U.S. Department of the Air Force, January 2009), 5.

<sup>91</sup> *Ibid.*

<sup>92</sup> Elisabeth Bumiller, "Facing Language Gaps and 'Flying Trucks,' U.S. Trains Afghan Pilots," February 27, 2009, <http://www.nytimes.com/2009/02/28/world/asia/28copter.html?fta=y> (accessed December 4, 2009).

<sup>93</sup> Jay Lindell, "DoD Press Briefing with Brig. Gen. Lindell," Pentagon, Arlington, Va., January 24, 2008, <http://www.defense.gov/transcripts/transcript.aspx?transcriptid=4126> (accessed December 4, 2009).

<sup>94</sup> CJ Radin, "Afghan National Army Air Corps: February 2009 Update," February 20, 2009, [http://www.longwarjournal.org/archives/2009/02/afghan\\_national\\_army.php](http://www.longwarjournal.org/archives/2009/02/afghan_national_army.php) (accessed December 4, 2009).

<sup>95</sup> *Ibid.*

<sup>96</sup> Zachary Wilson, "Constructing an Air Corps From the Ground Up," June 2, 2009, <http://www.globalsecurity.org/military/library/news/2009/02/mil-090206-afns04.htm> (accessed December 4, 2009).

<sup>97</sup> Charles J. Dunlap, Jr., "Collateral Damage and Counterinsurgency Doctrine."

<sup>98</sup> *Ibid.*

<sup>99</sup> *Ibid.*

<sup>100</sup> Romero Reid, "Defining the Air Force Contribution to CENTCOM Operations—An Exercise In Strategic Communication," Maxwell Air Force Base, Alabama, April, 2008, <https://www.afresearch.org/skins/RIMS/display.aspx?moduleid=be0e99f3-fc56-4ccb-8dfe-670c0822a153&mode=user&action=researchproject&objectid=3fc10303-1721-4e77-a2fd-7b5e931d138c> (accessed December 4, 2009).

<sup>101</sup> *Ibid.*

<sup>102</sup> *Ibid.*

<sup>103</sup> Arthur W. Lichte, "Air Mobility Accomplishments and Challenges," February 22, 2008, [http://www.afa.org/events/AWS/2008/post\\_Orlando/scripts/Lichte.asp](http://www.afa.org/events/AWS/2008/post_Orlando/scripts/Lichte.asp) (accessed January 2, 2010).

<sup>104</sup> Headquarters Air Mobility Commander, "Year in Review," <http://www.amc.af.mil/shared/media/document/AFD-090122-020.pdf> (accessed December 4, 2009).

<sup>105</sup> “8 U.S. Troops Killed in Fierce Attack on Afghanistan Outposts,” Associated Press, October 04, 2009, <http://www.foxnews.com/story/0,2933,559741,00.html> (accessed December 4, 2009).

<sup>106</sup> David Axe, “Axeghanistan ‘09: In Afghanistan Battle, Air Force Contribution Ignored,” October 9, 2009, <http://warisboring.com/?p=2712> (accessed December 4, 2009).

<sup>107</sup> Ibid.

<sup>108</sup> Ibid.

<sup>109</sup> Ibid.

<sup>110</sup> John A. Tirpak, “The Irregular Air Battle,” Air Force Magazine, August 2009, <http://www.airforce-magazine.com/MagazineArchive/Pages/2009/August%202009/0809battle.aspx> (accessed December 4, 2009).

<sup>111</sup> Romero Reid, “Defining the Air Force Contribution to CENTCOM Operations—An Exercise In Strategic Communication.”

<sup>112</sup> Ibid.

<sup>113</sup> The United States Air Force Home Page, <http://www.af.mil/> (accessed December 24, 2009).

<sup>114</sup> “Airpower Summary: October 3 2009,” US Air Forces Central Command Website, October 6, 2009, <http://www.centaf.af.mil/news/story.asp?id=123171423> (accessed January 9, 2010).

<sup>115</sup> U.S. Department of the Air Force, “Air Force Doctrine Document 1: Basic Doctrine,” (Washington, DC: U.S. Department of the Air Force, November 17, 2003) <http://www.e-publishing.af.mil/shared/media/epubs/AFDD1.pdf> (accessed December 4, 2009), 24.

<sup>116</sup> Ibid., 43.

<sup>117</sup> Ibid., 40.

<sup>118</sup> Ibid., ii.

<sup>119</sup> Kenneth Beebe, “The Air Force’s Missing Doctrine: How the US Air Force Ignores Counterinsurgency,” Air & Space Power Journal, Spring 2006, <http://www.airpower.maxwell.af.mil/airchronicles/apj/apj06/spr06/beebe.html> (accessed December 4, 2009).

<sup>120</sup> David J. Dean, “The Air Force Role in Low-Intensity Conflict,” October 1986, [http://aupress.maxwell.af.mil/Books/Dean\\_LIC/dean\\_LIC.pdf](http://aupress.maxwell.af.mil/Books/Dean_LIC/dean_LIC.pdf) (accessed December 4, 2009), 99.

<sup>121</sup> Daniel Baltrusaitis, “Airpower: The Flip Side of COIN.”

<sup>122</sup> Charles J. Dunlap, Jr., “Shortchanging the Joint Fight: An Airman’s Assessment of FM 3-24 and the Case for Developing the Truly Joint COIN Doctrine.”

<sup>123</sup> Charles J. Dunlap, Jr., "Collateral Damage and Counterinsurgency Doctrine."