

Airpower and Irregular War

A Battle of Ideas

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In a recent *Wall Street Journal* article, “Why Air Power Alone Won’t Beat ISIS [Islamic State Iraq and Syria],” military historian and foreign-policy analyst Max Boot presents a clear thesis expressed in his title: anti-ISIS coalition airpower efforts will fail if not combined with ground forces.¹ His article describes early airpower theories and their limitations confronting irregular warfare (IW).² He looks at the airpower doctrine devoted to strategic air warfare for an industrial age but neglects more contemporary thinking. His critique appears to be on the mark and is largely unchallenged by many contemporary Airmen, but Boot’s article misses an even more important question given public opposition to committing ground forces in Syria and Iraq: what can airpower do to confront the Islamic State? Or stated more generally, what can air forces do to counter IW?

A survey of the relatively limited contemporary literature devoted to airpower and IW reveals a focus on kinetic effects, such as bombing and targets, and overlooks the political nature of irregular war. For contemporary Airmen confronting IW, three ideas expressed by Prussian theorist Carl von Clausewitz set the stage: (1) War is an instrument of politics, (2) “The first, the supreme, [and] the most far-reaching act of judgment that the statesman and commander” have to discern and agree upon is the kind of war they are facing, and (3) Everything in strategy is very simple, but that does not mean that everything is very easy. Great strength of character, clarity, and firmness of mind are needed to follow through and not be distracted by thousands of diversions.³

With these thoughts in mind, Airmen should consider the following thesis: In irregular war, first and foremost, airpower is an instrument of politics. No matter how spectacular its technological potential in air, space, and cyberspace domains, Airmen must remember that airpower is simply a means to achieve a political end. Good, effective ideas exist on how to use airpower’s flexibility and many attributes that enable other instruments of power, but Airmen must remember that airpower has to be used within a comprehensive political strategy; airpower alone, especially kinetic air strikes, cannot substitute for sound policy.

At its core IW is conceptual—a battle of ideas. Considering the Arab Revolt from 1916–1918, T. E. Lawrence observed the difficulty posed for a conventional army confronting an idea: “How would the Turks defend . . . [against] an influence, a thing invulnerable, intangible, without front or back, drifting about like a gas?”⁴ Writing of the Chinese Revolution, Mao Zedong talked of winning the hearts and minds of the people and described a process of using an ideologically trained army not only to fight but also to persuade the people through word (propaganda, education, and indoctrination) and deed (moral example, civic actions, and coercion). Along the same lines, contemporary Australian counterinsurgency (COIN) expert David Kilcullen defines COIN as “a competition with the insurgent for the right and the ability to win the hearts, minds and acquiescence of the population.”⁵ He notes that for success, the counterinsurgent must use combat power carefully, indeed even sparingly, because misapplied firepower “creates blood feuds, homeless people and societal disruption that fuels and perpetuates the insurgency.” He adds, “The most beneficial actions are often local politics, civic action, and beat-cop behaviors. For your side to win, the people do not have to like you but they must respect you, accept that your actions benefit them, and trust your integrity and ability to deliver on promises, particularly regarding their security.” “In this battlefield,” he observes, “popular perceptions and rumor are more influential than the facts and more powerful than a hundred tanks.”⁶

The difficulty of IW lies not in theory but in practice. “Winning hearts and minds” seems intuitively obvious but proves exceedingly hard to do. How do you convince a population of your righteous view when you are an outsider and don’t speak the language or know the culture? Irregular war theory evokes Sun Tzu’s famous line, “Know the enemy and know yourself; in a hundred battles, you will never be defeated.”⁷ This certainly is a wise observation, but how can you “know your enemy” in a single short deployment? Thus, the Airman’s conundrum is to use airpower as an instrument to advance the overall political objective without damaging the cause through excessive force.

IW poses a particularly tough challenge for airpower and Airmen. Fortunately, two excellent sources influence current doctrinal thinking: “Air Theory, Air Force, and Low Intensity Conflict: A Short Journey to Confusion” by Col Dennis M. Drew, USAF, retired, and *Airpower in Small Wars: Fighting Insurgents and Terrorists* by James S. Corum and Wray R. Johnson.⁸ Colonel Drew ably critiques the shortcomings of the first 50 years of US Air Force doctrinal thinking (or lack thereof) regarding irregular war, while Corum and Johnson present a history of airpower in small wars through a series of twentieth-century case studies. Both sources link classic IW theory with useful ideas made possible by airpower.

In his article, Colonel Drew asserts that the Air Force “has not effectively accounted for the realities” of irregular war in its theory of airpower and, instead, preferred to think of it as “little more than a small version of conventional war.”⁹ He succinctly presents five differences between insurgencies and conventional wars that proved vexing to airpower’s application:

1. Time—classic insurgencies were protracted struggles intended to frustrate the Western concept of short, decisive wars.

2. Dual military and political strategy—IW featured both a military and a civilian political strategy intended to harass and frustrate a government by showing its inability to cope. After wearing down the government's resources and morale, the insurgents harnessed the masses to overwhelm government forces in a conventional campaign. In other words, Airmen can't directly influence a government's policies, and when airpower is called for in direct combat, it's too late.
3. Insurgents used guerrilla tactics to negate superior government firepower by blending insurgents into the civilian population and deny airpower targets.
4. Insurgent/guerrilla logistics were largely immune from classic airpower interdiction and strategic attack, being too small, too dispersed, and too blended into the populace for attack.
5. The center of gravity was the same for the government and the insurgents: the people. "Putting fire and steel on target" may backfire by alienating this center of gravity.¹⁰

Drew cautioned that US Airmen tend to be "doers" rather than "thinkers" and value technology and mental toughness more than devotion to academic study and conceptual inquiry. During the first five decades of Air Force doctrinal development, well-reasoned thinking on the application of airpower appeared occasionally, but basic Air Force doctrine was "unaffected at best and contradictory at worst" in its treatment of irregular war.¹¹ In essence, Drew's article challenged a generation of Air Force leaders to do better.

Seeking to fill an intellectual void and create a textbook for teaching airpower's role in irregular war, Corum and Johnson argue that airpower is an "indispensable tool" for militaries confronting terrorists, guerrillas, insurgents, or other irregular forces. They emphasize that all forms of aviation comprised airpower to include army, navy, and air force aircraft, plus civilian, police, remotely piloted aircraft (RPA), space, and other nontraditional aviation sources. Presenting a series of in-depth airpower case studies ranging from the 1916 Mexican punitive expedition against Pancho Villa to Israeli air strikes against Hezbollah in the early 2000s, Corum and Johnson conclude with 11 general lessons:

1. A comprehensive strategy is essential. Military, political, economic, social, and other resources must be coordinated to attain a political goal.
2. The support role of airpower, as in intelligence, surveillance, and reconnaissance (ISR), transport, medical evacuation, supply, etc., is usually the most important and effective mission in a guerrilla war.
3. The ground attack role of airpower becomes more important when the war becomes conventional.
4. Bombing civilians is ineffective and counterproductive. Campaigns to punish backfire.
5. There is an important role for the high-tech aspect of airpower in small wars, as in smart bombs, space, cyber, and RPAs).

6. There is an important role for the low-tech aspect of airpower in small wars. Simple, old aircraft can still do the job and may be more cost-effective.
7. Effective joint operations are essential for the efficient use of airpower.
8. Small wars are intelligence intensive.
9. Airpower provides the flexibility and initiative that is normally the advantage of the guerrilla.
10. Small wars are long wars.
11. The United States and its allies must put more effort into small wars training. Small or irregular wars are not simply smaller versions of conventional war. Similarly, building host nation (HN) airpower capacity is an effective force multiplier.¹²

The airpower-oriented writings of Drew, Corum, and Johnson complement the important 2006 *Counterinsurgency* manual (Army FM 3-24/Marine Corps Warfighting Publication [MCWP] 3-33.5)—signed by then Lt Gens David H. Petraeus, USA, retired, and James N. Mattis, USMC, retired. In this first new counterinsurgency (COIN) manual in 20 years, a celebrated writing team captures classic ideas of how to defeat insurgency through protecting the population: “The government normally has an initial advantage in resources; however, that edge is counterbalanced by the requirement to maintain order and protect the population and critical resources. Insurgents succeed by sowing chaos and disorder anywhere; the government fails unless it maintains a degree of order everywhere.”¹³

Counterinsurgency's “Appendix E: Airpower in Counterinsurgency” recognizes airpower’s asymmetric advantage and echoes the ideas of Drew, Corum, and Johnson. The appendix emphasizes airpower’s supporting role in most COINs. It acknowledges airpower’s importance in direct strike, intelligence collection, transport, helicopter troop lift, close air support, reconnaissance, surveillance, and the need to develop a HN’s airpower capability. Still, with the manual’s population protection emphasis, the appendix cautions that “precision air attacks can be of enormous value in COIN operations: however, commanders [must] exercise exceptional care. Bombing, even with the most precise weapons, can cause unintended civilian casualties. Effective leaders weigh the benefits of every air strike against its risks. An air strike can cause collateral damage that turns the people against the host-nation (HN) government and provides insurgents with a major propaganda victory.”¹⁴

Succinct, insightful, and conceptually sound, FM 3-24’s airpower annex represents an important step forward in doctrinal thinking regarding airpower and irregular war. Furthermore, it demonstrates the value of applying academic thought to warfighting challenges.¹⁵

Despite the doctrinal advance, Air Force Maj Gen Charles J. Dunlap, Jr. claims the acclaimed Army-Marine COIN manual failed to go far enough. In *Shortchanging the Joint Fight: An Airman’s Assessment of FM 3-24 and the Case for Developing Truly Joint Doctrine*, General Dunlap acknowledges the manual’s skillful statement of classic, population-centric COIN doctrine, but points out the document’s failure to exploit contemporary airpower’s potential made possible by advanced technology.

More importantly, the general argues, “the value of an Airman’s contribution to the COIN . . . is not limited to airpower capabilities,” but, “equally or more important is the Airman’s unique way of thinking.” A joint doctrine, including an air-minded perspective, must emerge to fight unconventional war.¹⁶

In a cogent argument, General Dunlap proposes change to FM 3-24’s troop-heavy, close-engagement approach. Airpower represents an asymmetric advantage for the United States. Thus, he wants to replace American boots on the ground, more likely to stir local resentment of foreign occupiers, with technology-enhanced capabilities of air, space, and cyberspace.¹⁷ He reasons that under present conditions, “masses of ground forces, especially American troops, simply is not sustainable strategy.”¹⁸ Public aversion to US casualties and long-term, costly employment of American ground troops weakens FM 3-24’s case. Instead of “clear-hold-build,” airpower could provide an alternative “hold-build-populate,” where airpower could help create safe havens . . . abandoned areas that could be rehabilitated, protected, and repopulated.¹⁹ In essence, General Dunlap fuses FM 3-24 COIN theories with contemporary precision, high-technology capabilities and thinking. In his view, “the challenge for military strategists is to devise pragmatic options within the resources realistically available to political leaders.”²⁰

Appearing at roughly the same time as General Dunlap’s study, a critique by noted airpower theorist Phillip S. Meilinger addresses the boots-on-the-ground approach of American COIN doctrine. Even with the relative success of the 2007–8 surge in Iraq, Meilinger considers the presence of thousands of American ground troops dangerous and deadly for US forces and Iraq’s civilian population. Instead, he suggests that the United States objectively study the Royal Air Force’s “air-control” operations in the Middle East during the 1920s and 1930s and the airpower, special operations forces (SOF), and indigenous ground forces that succeeded in Bosnia, Kosovo, Afghanistan in 2001–2, and Iraq in 2003.²¹ In essence, Meilinger reinforces General Dunlap’s argument and calls for a joint, air-centric COIN to build on American strengths and avoid political weaknesses. In other words, precision airpower—plus SOF, ISR, and indigenous troops—is the key.²²

In “Preparing for Irregular Warfare: The Future Ain’t What It Used to Be,” Col John Jogerst, USAF, retired, lauds the Air Force’s superb tactical capabilities but proclaims these skills “irrelevant” strategically. He states that in COIN, “the critical capability involves building the partner nation’s airpower—an essential distinction.”²³ In a war for political legitimacy, the USAF must understand the difference between “doing COIN (the job of the local authorities) and enabling COIN (the role of external actors),” including the United States.²⁴ Agreeing with FM 3-24, Colonel Jogerst emphasizes assisting the HN by enhancing its local presence and enabling small unit tactical prowess through “immediate, precise, and scalable firepower.”²⁵ But unlike General Dunlap or Meilinger, he emphasizes foreign internal defense (FID), building partner capability, and training HN air forces to do the job themselves.²⁶

Colonel Jogerst proposes creating a permanent USAF IW wing staffed by COIN experts to avoid the usual American tendency to provide overwhelming force independent of local control. Since IW and COIN are inherently political wars, HNs must be trained to function independently and reinforce the government’s legitimacy.²⁷ Hence, a USAF IW wing would provide a long-term, sustainable organization with a

COIN group to teach airpower employment and provide initial capability and an FID group to develop HN capability. Additionally, Colonel Jogerst stresses that the wing must prepare a small number of personnel with intensive cultural and language skills to build useful personal relationships with the partner nations.²⁸

Although not specifically oriented for IW, another work from a different source exemplifies General Dunlap's argument for novel, "air-minded" thinking. Dr. Sanu Kainikara's *The Bolt from the Blue: Air Power in the Cycle of Strategies* (2013) presents broad, fresh, air-minded perspectives useful for IW at the conceptual, strategic level. A former Indian air force wing commander and current air theorist at Australia's Air Power Development Centre, Dr. Kainikara argues that airpower planners must reject the concept of a linear end state.²⁹ Instead, airpower represents an instrument in a cycle of strategies that include influence and shape, deterrence, coercion, and punishment. In other words, the spectrum of violence is not a line—as often depicted with humanitarian assistance on one end and total war on the other—but a circle or cycle with war termination immediately linked to postconflict stabilization. In this, Dr. Kainikara evokes Clausewitz's famous aphorism, "In war the result is never final."³⁰ Just as classic insurgency theory often talked of stages of guerrilla or irregular war, Dr. Kainikara suggests applying COIN air strategies as a cyclical process.

Dr. Kainikara emphasizes the correct calculation of ends and means and airpower's inherent flexibility. For example, in the strategy of influence and shape, he describes distinct airpower contributions to monitor, assist, intervene, police, and stabilize in an effort to avoid conflict.³¹ Highlighting airpower's strategic contribution, Dr. Kainikara explores its ability to apply nonlethal force by monitoring, providing physical assistance and intervention through airlift, and active policing and stabilization through ISR. Like General Dunlap, Dr. Kainikara articulates four airpower advantages applicable to irregular war:

1. It carries a comparatively low operational risk with respect to one's own casualties.
2. Since operational risk is low, it is easier to obtain political support for action.
3. Airpower is scalable in that it is relatively easy to ramp up or down the intensity and tempo of operations.
4. Air responds rapidly to evolving threats.³²

Consequently, Western policy makers may be unable to resist applying limited airpower even when airpower alone may not win an irregular war. The need to "do something" will trump military planners' understanding of airpower's limits in fighting insurgencies.

Recently, retired Air Force lieutenant general David A. Deptula provided another air-minded way of thinking, but instead of Dr. Kainikara's strategic focus, the general advocates an operational approach to exploit emerging technologies. In a series of wide-ranging, insightful articles, speeches, and testimony before the Senate Armed Services Committee, General Deptula stresses the synergies possible by RPA and fifth-generation aircraft currently labeled as "fighters" but are more accurately "sensor-shooters" that will permit information age warfare. By combining the attributes of traditional ISR on one stealthy, data-linked aerial platform armed with ad-

vanced precision weapons, information-age airpower will breach sophisticated air defenses to achieve desired effects on the battlefield. Although his remarks are primarily aimed at streamlining joint organizations, improving command and control, and harnessing possibilities for information-age warfare, General Deptula's ideas show promise for IW, particularly those conflicts that escalate toward conventional operations. As technology proliferates, even future irregular threats will feature enhanced information and antiair capabilities. In short, air planners must be open to harnessing new capabilities made possible by cutting-edge technology.³³

In sum, challenged by Colonel Drew and historically analyzed by Corum and Johnson, thinking on airpower's role in IW significantly advanced during the past decade. Dunlap, Meilinger, Jogerst, and Kainikara conceptualize the air instrument as a tool in the fight against contemporary, irregular wars. Moreover, airpower theory, as shown by General Deptula, suggests the importance of advanced technology as a force multiplier. As Meilinger and others articulate, airpower combined with advanced ISR and SOFs generates unparalleled precision strike and greatly enhances local forces. Likewise, Colonel Jogerst gets it right with his emphasis on FID—the need to build HN capacity. More recently, operations in Afghanistan, Iraq, and Syria demonstrate the value of airborne ISR in providing persistent overwatch for ground operations and convoy protection and in guarding forward outposts. Despite airpower's important technological contribution, Airmen must resist the lure of technological determinism. Technology is vital and should not be minimized, but it does not provide a silver bullet.

Context matters, history matters, and the political ends must be understood and acceptable to the populations involved. Airmen must not forget that COIN and IW are inherently political. As such, outsiders will inevitably face frustration when local domestic politics and internal dysfunction take their toll. Airpower may provide enhanced capabilities to a HN but cannot substitute for competent government. Therefore, two additional observations from T. E. Lawrence, quoted below, complement the ideas of air theorists and should not be ignored:

1. Rebellion must have an unassailable base, something guarded not merely from attack, but from the fear of it. . . . It must have a sophisticated alien enemy, in the form of a disciplined army of occupation too small [for the territory]. It must have a friendly population, not actively friendly, but sympathetic to the point of not betraying the rebel movements to the enemy. Rebellions can be made by 2% active in a striking force, and 98% passively sympathetic.
2. In 50 words: Granted mobility, security (in the form of denying targets to the enemy), time, and doctrine (the idea to convert every subject to friendliness), victory will rest with the insurgents, for the algebraic factors are in the end decisive, and against them perfections of means and spirit struggle quite in vain.³⁴

Lawrence's ideas provide a blueprint not only to the insurgent—in the achievement of mobility, security, time, and doctrine and the creation of an unassailable base—but also to the counterinsurgent to deny these elements to the enemy. Airmen must contribute in the battle for ideas for irregular war through creative thinking—how to employ the many unique, force-multiplying attributes of airpower in the

comprehensive political strategy. As examined, contemporary air theorists offer many of the tactical, operational, and strategic ideas needed to enhance local forces and avoid large numbers of American boots on the ground. Still, Airmen must recognize a caution: used in political isolation or without strategic thought, airpower simply illustrates the truth of Lawrence's 50 words: "for the algebraic factors are in the end decisive, and against them perfections of means and spirit struggle quite in vain." ★

Notes

1. Max Boot, "Why Air Power Alone Won't Beat ISIS," *Wall Street Journal*, 9 December 2015, A15. The author thanks Phillip S. Meilinger, Jim Titus, Wray Johnson, and two anonymous *Air and Space Power Journal* (ASPJ) referees for insightful comments that improved this work.

2. Although specialists will debate the nuances and differences between terms, this article will use *irregular warfare*, *small wars*, *guerrilla war*, and *counterinsurgency* interchangeably. Additionally, it substitutes *irregular warfare* (IW) for *low-intensity conflict* (LIC) for Dr. Dennis Drew's observations. For astute commentary on the problem of terminology in irregular warfare/counterinsurgency/small wars, see Colin S. Gray, "Irregular Warfare: One Nature, Many Characters," *Strategic Studies Quarterly* 1, no. 2 (Winter 2007): 37.

3. These famous passages have been paraphrased. Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1984), 87, 88, 178.

4. Better known as Lawrence of Arabia, Lawrence produced a number of insightful writings on guerrilla warfare of which *The Seven Pillars of Wisdom* is the most famous, but his short "On Guerrilla Warfare" and "27 Articles" are valuable for succinct insights. T. E. Lawrence, "T. E. Lawrence on Guerrilla Warfare," *Encyclopedia Britannica*, 6 November 2014 (originally published in the 14th ed., 1929), <https://www.britannica.com/topic/TE-Lawrence-on-guerrilla-warfare-1984900>. See also T. E. Lawrence, "The 27 Articles of T. E. Lawrence," from *The Arab Bulletin*, 20 August 1917, http://wwi.lib.byu.edu/index.php/The_27_Articles_of_T.E._Lawrence.

5. David Kilcullen, "Twenty-Eight Articles: Fundamentals of Company-Level Counterinsurgency," *IO Sphere*, Summer 2006, 29, www.au.af.mil/info-ops/iosphere/iosphere_summer06_kilcullen.pdf.

6. *Ibid.*

7. As famous as this line is, consider carefully the rest of the quote: "When you are ignorant of the enemy but know yourself, your chances of winning or losing are equal. If ignorant both of your enemy and of yourself, you are sure to be defeated in every battle." Gen Tao Hanzhang, *Sun Tzu's Art of War: The Modern Chinese Interpretation* (New York: Sterling Innovation, 2007), 36.

8. Dennis M. Drew, "Air Theory, Air Force, and Low Intensity Conflict: A Short Journey to Confusion," in *The Paths of Heaven: The Evolution of Airpower Theory*, ed. Phillip S. Meilinger (Maxwell AFB, AL: Air University Press, 1997), 321–47; and James S. Corum and Wray R. Johnson, *Airpower in Small Wars: Fighting Insurgents and Terrorists* (Lawrence, University of Kansas Press, 2003).

9. Drew, "Air Theory," 321.

10. Paraphrased from *ibid.*, 323–25.

11. *Ibid.*, 347.

12. Corum and Johnson, *Airpower in Small Wars*, 425–37. The 11 points are quoted verbatim from Corum and Johnson while Dr. Farquhar has added additional comments based on the book's commentary.

13. Headquarters (HQ) Department of the Army and HQ Marine Corps Combat Development Command, Department of the Navy, HQ US Marine Corps, Field Manual (FM) 3-24 and Marine Corps Warfighting Publication (MCWP) No. 3-30.5, *Counterinsurgency*, 15 December 2006, 1-2. Although the manual has both Army and Marine Corps numerical designations, this article will simply refer to it as FM 3-24. In *The Gamble: General Petraeus and the American Military Adventure in Iraq* (New York: Penguin Press, 2009), Thomas E. Ricks describes the writing of FM 3-24 as an intellectual, policy, and leadership tour de force. Ricks details General Petraeus's role in assembling a diverse team of practitio-

ners and academics, both military and civilian, to develop a groundbreaking, discerning, focused work challenging past approaches to counterinsurgency and prescribing a way forward. FM 3-24 features the writings of David Galula, Charles Calwell, David Kilcullen, Roger Trinquier, and others in addition to famed guerrilla-warfare classics, including Sun Tzu, T. E. Lawrence, and Mao Zedong. The field manual's annotated bibliography is impressive and worth professional study.

14. FM 3-24/MCWP No. 3-30.5, *Counterinsurgency*, E-1. The similarities between FM 3-24's airpower annex and Corum and Johnson are intentional: Dr. Jim Corum largely authored the document with coordination in the early stage with Dr. Conrad Crane and Dr. Wray R. Johnson. Wray Johnson, telephone call with author, 18 November 2016.

15. The author thanks an unnamed referee for this article in pointing out a RAND Project Air Force monograph that provides a valuable primer on airpower's role in counterinsurgency and advocates for expanding the resources and scope of Air Force Special Operations Command's 6th Special Operations Squadron. In a thorough, perceptive analysis, the RAND team ably articulates four COIN principles: (1) understand the adversary, (2) build state capacity and presence, (3) control the population, and (4) keep the use of force to a minimum. The RAND study reinforces the ideas of Drew, Corum, Johnson, and others expressed in this article that airpower provides a vital, cost-effective COIN enabler for a host nation's political strategy. 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 Project Air Force, 2006).

16. Maj Gen Charles J. Dunlap, Jr., *Shortchanging the Joint Fight: An Airman's Assessment of FM 3-24 and the Case for Developing Truly Joint Doctrine* (Maxwell AFB, AL: Air University Press, 2008), 7-8. Note: General Dunlap's observations made an impact; the current counterinsurgency manual is now a joint publication (JP): JP 3-24, *Counterinsurgency*, 22 November 2013, http://www.dtic.mil/doctrine/new_pubs/jp3_24.pdf.

17. Dunlap, *Shortchanging the Joint Fight*, 13.

18. *Ibid.*, 33.

19. *Ibid.*, 43.

20. *Ibid.*, 64.

21. Phillip S. Meilinger, "Counterinsurgency from Above," *Air Force Magazine* 91, no. 7 (July 2008): 39, <http://www.airforce-magazine.com/MagazineArchive/Documents/2008/July%202008/0708COIN.pdf>. Another well-written article reinforcing the precision airpower plus SOF theme is John James Patterson VI, "A Long-Term Counterinsurgency Strategy," *Parameters* 40, no. 3 (Autumn 2010): 118-31.

22. Phillip S. Meilinger, e-mail to author, 12 May 2016.

23. John D. Jogerst, "Preparing for Irregular Warfare: The Future Ain't What It Used to Be," *Air and Space Power Journal* 23, no. 4 (Winter 2009): 68.

24. *Ibid.*

25. *Ibid.*, 72.

26. *Ibid.*, 75.

27. *Ibid.*, 74.

28. *Ibid.*, 76. Complementing Colonel Jogerst's work, a 2010 RAND study, *Courses of Action for Enhancing US Air Force "Irregular Warfare" Capabilities*, systematically articulates four courses of action to build an IW mind-set and build capacity within the institutional Air Force. It reinforces Jogerst's emphasis on building partner capacity through foreign internal defense and insists that many essential COIN tasks could not be done without the Air Force. Richard Mesic et al., *Courses of Action for Enhancing US Air Force "Irregular Warfare" Capabilities: A Functional Solutions Analysis* (Santa Monica, CA: RAND Project Air Force, 2010), xi, xix.

29. His statement refers to JP 5-0 that outlines an operational design process envisioning an initial state and identifying friendly centers of gravity, tangible "lines of effort" for focus, intermediate objectives for measured progress, and enemy centers of gravity to achieve a desired end state linking military and political objectives. JP 5-0, *Joint Operation Planning*, 11 August 2011, http://www.dtic.mil/doctrine/new_pubs/jp5_0.pdf.

30. Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1984), 80.

31. Sanu Kainikara, *The Bolt from the Blue: Air Power in the Cycle of Strategies* (Canberra, Australia: Air Power Development Centre, 2013), 35.

32. Paraphrased from *ibid.*, 74–75.

33. Lt Gen David A. Deptula, *Beyond the "Bomber": The New Long-Range Sensor-Shooter Aircraft and United States National Security* (Arlington, VA: Air Force Association, 2015), http://media.wix.com/ugd/a2dd91_1633acd30231444796f217d0cc39af65.pdf; David A. Deptula, "The Combat Cloud: A Vision of 21st Century Warfare," keynote address, Association of Old Crows, Washington, DC, 1 December 2015, http://media.wix.com/ugd/a2dd91_1550c5f873934b068afa8be3ad4ddd54.pdf; and David A. Deptula, "Revisiting the Roles and Missions of the Armed Forces," Statement before the Senate Armed Services Committee, 5 November 2015, http://www.armed-services.senate.gov/imo/media/doc/Deptula_11-05-15.pdf.

34. Lawrence described the "algebraic" factor as those things that could be measured—size of territory, number of troops, population size, and miles of roads and railroads—noting that in Arabia, the Turks simply did not have enough troops for the land mass. Lawrence, "On Guerrilla Warfare."



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