The history of military strategic thought is an ongoing struggle to develop relevant theory and doctrine in the face of ever-changing technology, tactics, and strategic environments. Although some theories expound truly universal principles that apply regardless of time or place, others are uniquely suited to a specific strategic context. Attempting to apply a particular theory to circumstances outside of the context for which it was developed can result in failure on the battlefield. Union officers' adherence to the teachings of Jomini led to unnecessary casualties, for example, because the technology of the American Civil War made the principles he developed following the Napoleonic Wars irrelevant.

US Air Force strategic planners appear to be making the same mistake those Union officers did. The doctrine they have developed is inexorably tied to theories of strategic airpower developed in the early Twentieth Century by Italian military theorist Giulio Douhet. Although the doctrine accounts for new technologies thanks to the more recent contributions of John Warden, it is poorly suited for the current counterinsurgencies being fought by the United States. Air Force performance in these conflicts has lagged as a result.

This paper will illustrate the stagnancy of strategic thought in the US Air Force. It will do so by first exploring the fundamental theoretical underpinnings of Air Force strategic doctrine, specifically the writings of Douhet and Warden. Next, the paper will investigate contemporary counterinsurgency theory in order to identify the building blocks of a successful counterinsurgency effort, including the role airpower should play in counterinsurgency. It also will examine current Air Force doctrine in order to see how it incorporates the various tenets of strategic airpower and counterinsurgency theory. Finally, the paper will study how implementation of this doctrine has played out on the battlefield in Afghanistan.

Douhet, Warden, and Strategic Airpower

Many regard Giulio Douhet as the father of modern airpower theory. An officer in the Italian army in the early 1900s, Douhet commanded one of the country's first aviation units in 1912 during Italy's war with the Ottoman Empire for control of Libya. During the conflict he began to formulate and record his thoughts on the strategic use of airpower during war, emphasizing the importance of high-altitude bombing.[i]

World War I was a watershed moment for Douhet. Disgusted by Italy's performance during the war, he...
aggressively advocated for a large strategic bombing force in his correspondence with senior military and
government officials. The hostile tone of his letters resulted in Douhet's court martial, and he continued to
develop his theories from a prison cell. Douhet left the army after the war and published his treatises on
airpower, *The Command of the Air*, in 1921. Although critics initially scoffed at Douhet's theory, by
World War II his concept of strategic airpower underpinned most country's approach to air warfare.[iii]

Douhet's theory is based on five key tenets. First, modern warfare (at least early Twentieth Century
warfare) is characterized by the idea of "total war"—there is no meaningful distinction between civilian
and military targets. Second, advances in weapons and tactics that favor the defense (machine guns,
artillery, and entrenchment) significantly reduce the effectiveness of ground offensives. Third, the speed,
elevation, and three-dimensional operating environment of the airplane make defending against it
difficult. Moreover, wars are won by shattering civilian morale with intensive firepower. Finally,
according to Douhet, long-range aerial bombardment is the ideal means for delivering that intensive
firepower to civilian targets.[iii]

Douhet saw airpower as the ideal means for avoiding an enemy's defenses and hitting its key
vulnerabilities. He noted that the maximum returns from aerial offensives "must be sought in places where
effective counteraction is negative and where the most vital and vulnerable targets are to be found."[iv]
Moreover, Douhet argued that a country's air force should be able to command the air and crush the
"material and moral resistance" of the enemy.[v] Doing so would assure victory without having to engage
enemy ground forces in combat.[vi]

Key to Douhet's theory was establishing "command of the air." In such a situation, a country's air force is
able to prevent the enemy from flying while retaining its own ability to fly.[vii] To establish command of
the air and engage in strategic bombardment, Douhet theorized that air forces needed just two types of
airplanes: bombers and combat planes. Bombers would engage surface targets and combat planes would
defend the bombers from enemy fighters.[viii]

Significantly, Douhet saw no role for the airplane in auxiliary or combat support roles such as transport,
reconnaissance, or even fire support for ground forces. He called the use of airpower in these roles as
"worthless, superfluous, harmful."[ix] In fact, Douhet specifically argued for independent air forces
devoted exclusively to strategic bombardment and maintaining command of the air. He went so far as to
advocate stripping auxiliary aviation from the army and the navy, claiming that maintaining those
capabilities diverted vital resources from the independent air force.[x]

The theories of John Warden also grew out of frustration with the use of airpower in earlier conflicts.
Warden, a US fighter pilot in Vietnam, thought airpower had been used ineffectively and piecemeal
during the conflict. By 1991, he was director of a planning cell at the Pentagon responsible for developing
Air Force battle plans. There, utilizing concepts he developed earlier as a student at the Air War College,
he designed Instant Thunder— the blueprint that would evolve into the US air strategy for the Gulf War.[xi]

Warden concluded that every state had "centers of gravity" where the enemy was most vulnerable.[xii]
This concept evolved into Warden's Enemy as a System (EAS) theory of airpower. In EAS, airpower is
used to influence enemy action by targeting key vulnerabilities in the enemy's subsystems.[xiii] Warden
defined these subsystems as elements in his Five Ring Model (FRM) of the enemy "system." Enemy
leadership is at the core of the model and is the center of the system. Insulating the enemy are concentric
rings representing the country's organic essentials/strategic materials, infrastructure, population, and
fielded military forces.[xiv] Warden believed that fully exploiting the enemy's system and subsystems
required a thorough understanding of the country's political environment, the identification of its political
objectives, a determination of how the state of its FRM subsystems affect its actions, location of specific
tangible targets that make up the subsystems, and the ability to attack those targets effectively. [xv]

Simply put, Warden assessed that an enemy could be paralyzed if airpower was used to hit enough of the right targets in the right subsystems. [xvi] Like Douhet before him, Warden believed airpower could be used exclusively to destroy an enemy’s ability and will to fight. Moreover, Warden believed that modern precision-guided munitions allowed air forces to deliver these "knock out blows" much more efficiently than they could when Douhet first developed the concept of strategic airpower. [xvii] Reflecting his confidence in the EAS/FRM theory, the air strategy Warden developed for the Gulf War envisioned winning the conflict without employing ground forces. [xviii] Moreover, the initial draft of the plan downplayed the need for what Douhet referred to as "auxiliary" air units. [xix]

Current US Air Force strategic doctrine still emphasizes the key principles of Douhet and Warden's theories. AFDD-1, Air Force Basic Doctrine, establishes guidance for the employment of US air and space forces across the full range of military operations. It lists seventeen operational functions for the Air Force, but devotes significant attention to two of them. [xx] "Strategic attack" and "counter air" clearly reflect the influence of Douhet and Warden. The doctrine defines strategic attack by emphasizing the idea that "it is possible to directly affect an enemy's sources of strength and will to fight without first having to engage and defeat their military forces." [xxi] The description of counter air operations harkens back to Douhet's notion of the command of the air by focusing on the need to enable other functions by gaining air superiority through the destruction, degradation, or disruption of enemy air forces. [xxii]

**Counterinsurgency Theory**

Contemporary counterinsurgency theory has been dominated by the writings of General David Petraeus and David Kilcullen. Petraeus, architect of the US counterinsurgency program in Iraq and current commander of American forces in Afghanistan, authored the US Army/Marine Counterinsurgency Field Manual--the first such manual in decades and generally considered a ground breaking discussion of irregular warfare. The work expresses thoughts about the subject that reflect the views of a long line of counterinsurgency theorists. Drawing heavily on the works of Cold War-era French counterinsurgency theorists David Galula and Roger Trinquier, Petraeus identifies a series of historical principles for counterinsurgency. These principles, many of which highlight the centrality of the population, include fostering the development of effective governance by a legitimate government, recognizing that political factors have primacy, thoroughly understanding the social and cultural environment, isolating the insurgents from their cause and support (the population), as well as providing security for the civilian population. [xxiii] This approach--often referred to as "population centric"--hinges on the idea that winning the support the population's neutral or passive majority is the key to victory. [xxiv] Kilcullen, takes a similar approach to the subject. The similarity should be of no surprise; Kilcullen, a retired Australian Army officer and former senior US State Department counterterrorism official, was part of the "brain trust" Petraeus tapped into while drafting the Field Manual. His analysis revolves around two fundamentals for counterinsurgency, both of which focus on the population. The first requirement is to "understand in detail what drives the [insurgency] in any given area or with any given population group." [xxv] In addition, counterinsurgents must put the well-being of non-combatant civilians ahead of all other considerations--even killing the enemy. [xxvi] Kilcullen distills counterinsurgency into a competition with the insurgents for the hearts, minds, and acquiescence of the population. [xxvii]

Successful counterinsurgencies, according to the theories propounded by these men, attack the basis of the insurgency--the underlying causes of popular discontent, whether political, economic, or social--and not just the insurgent fighters. [xxviii] Under these circumstances, an insurgency's center of gravity is its connectivity or link with the local population. [xxix] Sever that link and defeat the insurgency.
Recognizing the holistic nature of counterinsurgency, Petraeus argues that the discipline consists of five logical lines of operation: combat operations/security operations; host nation security force development; restoration/maintenance of essential services; governance; and economic development. Although listed first, theorists make clear that combat and security operations should not always take primacy in counterinsurgency operations. Petraeus, for example, notes that while military operations may at times predominate, political objectives always should guide the military's approach.

Counterinsurgency combat operations focus on defeating enemy forces, while protecting the population and infrastructure from hostile action. Kilcullen, however, notes the complexity inherent in fighting insurgents. Insurgents have no tangible strong points (or "aim points" in Air Force parlance) to attack or defend, since their strength is based on their connectivity to the population. He goes so far as to suggest that insurgent forces only should be targeted when they get in the way of the counterinsurgents' efforts to build host government legitimacy and efficacy. Direct combat with insurgents can in fact complicate counterinsurgent efforts; injudicious use of firepower in counterinsurgency (collateral damage) causes societal disruption that can further fuel the insurgency.

**Airpower and Counterinsurgency**

Airpower contributes significantly to counterinsurgency efforts. Counterinsurgency theorists argue that it is most useful in a support role by providing services such as intelligence, surveillance, and reconnaissance (ISR); transportation; and resupply. Theorists reviewing the British counterinsurgency experience in Malaysia determined that resupply, transportation, reconnaissance, close air support, strike, and communications were the prioritized best uses of airpower during the conflict. In particular, airpower plays an irreplaceable ISR role because it provides persistent surveillance of potential targets and over watch of sites counterinsurgents wish to protect. Moreover, airlift enables commanders to rapidly deploy, reposition, sustain, and redeploy land forces while bypassing insurgents and mitigating risk to counterinsurgent forces. Ideally, airlift in support of counterinsurgency should be capable of operating from austere or undeveloped runways and engage in precision airdrop resupply operations.

Reflecting counterinsurgency theory's conflicted relationship with combat operations, kinetic airpower has a limited role. Theorists argue that Warden's EAS/FRM system can be applied to counterinsurgency, although finding tangible subsystems to target is challenging. Irregular forces rarely present lucrative targets for strike missions, strategic bombing, or large-scale operations. The only tangible subsystem in an insurgency that is susceptible to dynamic targeting by airpower is the insurgency's leadership structure. Insurgencies vary significantly, however, and individual leadership figures only are important in insurgencies that are centrally controlled. Determining appropriate subjects for dynamic targeting in counterinsurgency runs contrary to the US Air Force's focus on traditional target systems such as national governments and conventional military forces. Moreover, even with advances in precision guided munitions and scalable payloads, kinetic use of airpower in counterinsurgency runs a high risk of collateral damage and civilian casualties that can undercut the legitimacy of the counterinsurgents and the host nation government.

**Air Force Counterinsurgency Doctrine**

Air Force counterinsurgency doctrine developed in large part in response to the paucity of discussion about airpower in the *Counterinsurgency Field Manual. Irregular Warfare*, released in 2007, attempts to marry the Air Force's long-standing attachment to ideas of strategic bombing reminiscent of Douhet to the reality of the conflicts in Iraq and Afghanistan. The document outlines a number of Air Force capabilities that can be utilized in counterinsurgency and shows awareness of current theory on the subject. It
discusses missions such as building host nation capacity, ISR, information operations, mobility/transportation, as well as command and control. Particular attention, however, is given to the subject of "precision engagement."[xlvi]

The discussion of precision engagement reflects Douhet and Warden's assertion that strategic airpower alone can win conflicts. *Irregular Warfare* observes that counterinsurgents can use airpower to monitor enemy forces, disrupt their movements, and prevent them from massing.[xlvii] It stresses the ability of airpower to attack insurgency leaders, tying it into Warden's EAS/FRM concept:

> Attacks on key nodes usually reap greater benefits than attacks on dispersed individual targets. For this reason, effective strike operations are inexorably tied to the availability of persistent ISR and the result of detailed target systems analysis that identifies and characterizes the targets of interest.[xlviii]

The doctrine argues that airpower serves as a force multiplier, limiting the US footprint in a counterinsurgency environment by allowing relatively small forces to "punch above their weight."[xl ix] Notably, however, the doctrine makes no mention of the role airpower plays in providing close air support to ground forces during counterinsurgency operations.

**Battle Lab: Afghanistan**

Airpower enthusiasts hail the conflict in Afghanistan as a watershed moment for the US Air Force, citing its innovative use of existing platforms to meet counterinsurgency mission requirements.[li] Strategic strike platforms initially designed to fight wars against industrialized nation states, such as the F-15E and the B-1 bomber, now engage in a variety of missions. These missions include overwatch, ISR, strike/dynamic targeting, and close air support of ground forces.[lii] Targeting pods and video downlinks mounted on virtually every platform in theater has greatly increased the number of aircraft available for ISR and related missions.[liii]

The Air Force struck key Taliban and al-Qa'ida targets in the initial stages of the war, according to the Air Force Association. Since 2006, however, the main task for airpower in Afghanistan has been providing tactical support to ground forces in the form of ISR, close air support, and aerial resupply.[liii] The importance of airpower may be reflected in the frequency of its use. The number of Coalition airstrikes in Afghanistan grew significantly as the conflict developed: 176 in 2005, 1770 in 2006, and 3369 in 2008.[liv]

**Air Power Shortfalls in Afghanistan**

Despite the sanguine appraisal of airpower effectiveness by the Air Force Association and others, further analysis of the conflict in Afghanistan suggests that Air Force has failed to adapt to the realities of counterinsurgency. Theorists argue that the ideal platform for counterinsurgency air operations should be inexpensive to acquire and maintain; have a long dwell time and long range; be multi-role and capable of performing ISR, close air support, transport, and psychological operations missions; be simple to operate; as well as have the ability to operate from austere and unimproved runways.[lv] Nonetheless, existing Air Force platforms meet very few of these requirements. Its transport aircraft have limited capability for reaching forces deployed to forward areas, and its Unmanned Aerial Vehicle (UAV) reconnaissance fleet—although technologically impressive—is too small to satisfy demand for persistent surveillance.[lvi] Moreover, despite claims of adaptability, Air Force 4th generation fighter and strike aircraft are poorly suited for most counterinsurgency missions. The platforms it uses for close air support in Afghanistan—the
A-10, the F-15E, and the F-16--have limited loiter/dwell time, cannot operate from unimproved facilities, and only the A-10 has an acceptable attack speed. The high operating costs of the aircraft, ranging from $4,000 to $13,000 per flight hour, also limits their attractiveness for counterinsurgency.

The limits of Air Force doctrine and platforms for counterinsurgency became clear during the conflict. Air strikes on Afghanistan's infrastructure during the initial stages of the conflict had no apparent effect on Taliban or al-Qa'ida behavior, and strike/dynamic targeting missions struggled to find targets suitable for their payloads--most missions rarely expended ordnance. During Operation Anaconda, pre-battle ISR flights detected less than fifty percent of the al-Qa'ida positions eventually encountered by ground forces and these positions survived extensive Coalition aerial bombardment before being overrun.

Conclusion

One can speculate as to why the US Air Force continues to cling to the theories of Douhet and Warden, even in circumstances under which these theories clearly are inappropriate. It may be sheer inertia. Military organizations are by nature conservative and rarely embrace change. The Air Force, although well regarded as an innovative organization (at least as far as technology is concerned), likely is no different in that regard. Pride also may be an issue. The theory of strategic airpower places the Air Force in the center of American efforts to fight and win wars, whereas the role prescribed to the Air Force in counterinsurgency theory is that of support and auxiliary. Who would embrace a theory that puts themselves in second place?

A less cynical explanation, however, suggests that Air Force strategic planners continue to embrace Douhet and Warden for reasons of foresight. It is entirely possible that the Air Force recognizes that although counterinsurgency defines the US military’s current strategic context, great power conflict is by no means dead. The United States could very quickly find itself in a war against an enemy (perhaps China) highly susceptible to strategic bombing and the EAS/FRM system. Although adherence to these theories may limit the Air Force’s role in counterinsurgency (a discipline seemingly well-suited to the Army and the Marine Corps), it also ensures that the service will not have to relearn the fundamentals of strategic airpower in the future when the country faces an existential threat.

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[ii] Shinner.


[vii] Douhet, 297.

[viii] Douhet, 308.

[ix] Douhet, 338.


[xv] Carr, 12.

[xvi] Atkinson, 57.


[xxiv] Petraeus, 32.


[xxviii] Petraeus, 103.


[xxx] Petraeus, 105.

[xxxi] Petraeus, 34.

[xxxi] Petraeus, 113.

[xxxiv] Kilcullen, 45.


[xxxvii] Cox, 9.

[xxxviii] Petraeus, 238.

[xxxix] Petraeus, 240.

[xl] Petraeus, 240.


[xlii] Cox, 7.


[xliv] Brown, 77-78.

[xlv] Petraeus, 237.


[liii] Grant, 4.


[liv] Grant, 3 and 14. The increase in the number of airstrikes in part reflects greater willingness on the part of insurgent forces to hold their ground when confronted by Coalition ground forces.

18.

[lvi] Cox, 16-17.


[lviii] Biddle, 24 and Grant, 9.


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