

# Redistributing Airpower for the Spectrum of Warfare

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## Redefining Relationships

Many of the air assets in the US inventory are expensive machines of war, designed to confront a peer adversary in high-end warfare. However, the majority of operations that have required US military resources for the past two decades did not require such high-end equipment.<sup>1</sup> Expensive fighter aircraft and bombers (e.g., F-15, F-16, F-22, F/A-18, F-35, and B-1B) have been used against an enemy that lacks an air force and credible integrated air defense systems, which is far less challenging than the environments for which these aircraft were designed. Additionally, the continuous use of high-end aircraft has depleted its useful life at an unprecedented pace, eroding overall readiness. While defense appropriations have increased recently, fiscal forecasts indicate that the trend of requiring the military to “do more with less” will continue, and budgets are expected to shrink into the future.<sup>2</sup> The full “spectrum of warfare”—from low-end insurgencies or irregular warfare to high-end peer conflicts—have notable differences in required capabilities, cost, and priorities.<sup>3</sup> Since airpower is integral to all forms of modern warfare, the US military must be prudent in the allocation of air capabilities within the service components to ensure adequate coverage. This allocation strategy is best accomplished by specializing procurement, roles, and responsibilities while identifying areas of unnecessary overlap or redundancy. The net effect would be increased effectiveness and efficiency of the joint force with each service component bringing unique capabilities. While the spectrum of warfare affects all service components, the focus of this article is between US Air Force and Army relationships in the land area of operations. Since counterinsurgency (COIN), stability, and hybrid warfare or low-end operations typically involve land components, the predominance of airpower is there to directly support the land mission. Close-in

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support is best accomplished with assets that are familiar with land component doctrine, which inherently includes land component tactics, techniques, and procedures (TTP). This approach is evidenced when examining the definitions of roles, administrative and operational control, and the lack of a return on investment when utilizing multirole over specialized platforms. When aggregated, an argument can be made for a fundamental shift in traditional US Air Force roles and mission. Therefore, while it may be a controversial topic, it is the author's opinion that the US Air Force should focus on high-end capabilities to confront peer adversaries. Simultaneously, the responsibility for low-end, close-in support airpower requirements of the land force should predominantly fall to the land component, traditionally the US Army.

### **Roles and Control**

Historically, the US Air Force and Army have been at odds over the role of airpower in warfare dating back to when the Air Force was part of the Army as the US Army Air Corps. Before World War II, airpower advocates led by Billy Mitchell argued that airpower should be used to strike at enemy centers of gravity, bypassing the stalemate of trenches while simultaneously destroying the vital organs of a country's war machine.<sup>4</sup> In other words, the use of airpower should be used with a strategic focus and for targets that could not be ranged by artillery. Conversely, US Army staff argued that airpower's purpose lay with close support and enabling the maneuver and objectives of ground forces.<sup>5</sup> During the Korean War, the theater commander, US Army Gen Mark W. Clark, received blunt feedback from US Air Force Gen Otto P. Weyland regarding competing airpower priorities. In August 1952, General Clark penned the following in a letter to his subordinate commanders regarding the friction between the differing opinions on Air Force and Army priorities:

It should be borne in mind that the theater commander, rather than any single service, bears over-all responsibility for successfully prosecuting the Korean War. Each component contributes its own specialized capabilities to the attainment of the theater commander's over-all mission and in so doing assists the other components; however, no single service exists solely or primarily for the support of another.<sup>6</sup>

General Clark effectively stated that the US Air Force and other service components were all working toward a common objective, but that no single component had primacy over another in the attainment of that objective. Differences remained regarding the application of airpower and were once again brought to the forefront with experiences in Vietnam. The US Army fielded a light-attack

aircraft, the OV-1 Mohawk, to good effect within its special forces community; however, infighting with the Air Force over the Army possessing fixed-wing light-attack aircraft helped hasten the eventual abandonment of the program.<sup>7</sup> A 1972 Rand Corporation study stated the following:

... the close air support issue manifests itself in a variety of differences between the Air Force and the Army. It is central to the establishment and maintenance of an effective relationship between air and ground elements in combat operations. The two services consider close air support an essential part of their missions and an essential element in their capabilities. There can be little doubt that the Army has established a de facto role for itself in close air support and this role is permanent. Nevertheless, the prospect for the future seems to be continued resistance by the Air Force to Army acquisition of additional responsibilities and capabilities for the function. But such resistance can be effective only if the Air Force demonstrates willingness, imagination, and responsiveness to the Army, and provides more versatile capabilities to perform the function.<sup>8</sup>

The close-in support role ideally falls to the land component, the Army. While the Joint Force commander (JFC) will have assets assigned to fulfill his or her objectives, it matters which service component has administrative control. The reason is that administrative control includes the responsibility for organizing, training, and equipping assets.<sup>9</sup> These responsibilities are influenced by service component doctrine and TTPs. Despite various service component assets being under the operational control of the JFC, ultimately, those assets will utilize service component doctrine at the tactical levels of execution.

Further evidence that close-in support should rest with the land component can be found by examining the construct of a conventional battlespace. The fire support coordination line (FSCL) is the defining boundary in which direct coordination with the land component is required.<sup>10</sup> The FSCL does not dictate the type of missions allowed short or beyond it and is primarily used for command and control and planning.<sup>11</sup> The air component is responsible for striking targets beyond the FSCL through air interdiction (detection, location, and engagement of targets of opportunity), in addition to performing air superiority missions.<sup>12</sup> Short of the FSCL, friendly ground maneuver elements may be operating, requiring that all fires be coordinated.<sup>13</sup> This situation highlights two main points: (1) coordination short of the FSCL is required to prevent fratricide; and (2) since ground maneuver elements are operating within this zone, fires may be in direct support of the ground scheme of maneuver. Placing dedicated close-in support aircraft under the Air Force purview may require aircrews and ground controllers to receive additional training to bridge doctrinal differences between the air and land components to maximize effectiveness. Additionally, the risk remains of

competing priorities between Air Force and Army requirements during platform acquisition and mission execution.

At issue is the adherence and steadfastness of the US Air Force and Army to previous agreements, namely the 1948 Key West Agreement, from which the previous and current iterations of the Department of Defense Directive (DoDD) 5100.01 were derived. The Key West Agreement was intended to resolve internal conflicts between the various service components about inherent capabilities. Some interpret the agreement as setting the limits of Army aviation and Air Force responsibility to provide Army air support requirements. However, the wording of the agreement mentions only that components should apply the “maximum avoidance of duplication in operations” and that “no component should develop or maintain, on an appreciable scale, forces which already exist in another component.”<sup>14</sup> The Key West Agreement and the DoDD 5100.01 have gone through numerous revisions, including the Goldwater-Nichols Defense Reorganization Act that further empowered joint combatant commanders and sought to improve efficiency between the services.<sup>15</sup> Despite the revisions and updates to commensurate changes with technology and global priorities, the roles and missions remained relatively unchanged.<sup>16</sup>

The wording is vague and open to broad interpretation. Still, it does not prohibit the Army from developing and operating its own specialized fixed-wing attack platforms, especially if that capability does not reside within the Air Force. More recently, an *Air & Space Power Journal* article by Col Jon Wilkinson and Dr. Andrew Hill, in addition to a threat from Congressman Michael Waltz to allow light-attack procurement by the Army, indicate both external and internal criticisms remain regarding the effectiveness of Air Force fulfillment of the close-in support mission.<sup>17</sup>

Currently, the United States has found itself embroiled in frustrating insurgencies that led to its involvement in its longest war. Insurgencies develop when a faction or group lacks the resources to directly confront a superior adversary and is a form of irregular warfare. Insurgency or guerrilla warfare is difficult to prosecute with traditional military methods. Per Fleet Marine Force Reference Publication (FMFRP) 12-18:

Guerrilla war is not dependent for success on the efficient operation of complex mechanical devices, highly organized logistical systems, or the accuracy of electronic computers. It can be conducted in any terrain, in any climate, in any weather; in swamps, mountains, in farmed fields. Its basic element is man, and man is more complex than any of his machines.<sup>18</sup>

The American Revolutionary War was one that had mostly an insurgency flavor with militiamen ambushing British supply lines and soft targets. Mao Tse-tung advocated insurgency or a protracted war (People's War) as the prime mover for political change and resistance to oppression.<sup>19</sup>

The key takeaway is the asymmetric nature of an insurgency (a form of irregular warfare) with measurements of strength and effectiveness not tied to conventional definitions of warfare. The other takeaway is that an insurgency is based on people and the requirement for a haven for insurgents to operate beyond the reach of conventional methods. These havens are in the form of territory, whether being remote regions or population centers. To the point of Colonel Wilkinson and Dr. Hill, irregular warfare does not require the expensive systems that comprise the majority of US Air Force combat air arms or the US military writ large due to its permissive environment and unconventional methods. It is also important to divorce the notion that close air support (CAS) and COIN operations are synonymous. True, a considerable number of air operations performed during the War on Terror have been CAS. This number was due to the large presence of security and stability operation forces and the inevitability of coming into contact with the enemy. Per Joint Publication (JP) 3-09.3, *Close Air Support*:

Close air support (CAS) is planned and executed to support ground tactical units. The air apportionment recommendation and allocation process for joint air operations, which includes CAS, occurs at the operational level. CAS planning focuses on providing timely and accurate fires in support of friendly forces in close proximity to the enemy. CAS can be conducted at any place and time friendly forces are in close proximity to enemy forces. The word "close" does not imply a specific distance; rather, it is situational. The requirement for detailed integration because of proximity, fires, or movement is the determining factor. At times, CAS may be the best available means to exploit tactical opportunities in the offense or defense by providing fires to destroy, disrupt, suppress, fix, harass, neutralize, or delay enemy ground forces.<sup>20</sup>

Low-end warfare, which can be thought of as synonymous with stability or COIN operations, is a protracted war with success not tied to volume or frequency of munition expenditures by airpower. Additionally, engagement with the enemy may be sporadic, localized, and over vast territories. This engagement makes US Air Force air control doctrine, utilizing fixed air tasking order cycles (ATO), and conventional fixed-wing fighters and bombers analogous to using an expensive sledgehammer to drive a nail.<sup>21</sup> As Colonel Wilkinson and Dr. Hill pointed out, the Air Force air control construct, as it stands with its fixed ATO cycles, is inefficient for low-end warfare because it lacks responsiveness and adaptability.<sup>22</sup> Historically, the joint forces air component commander has been

held by the US Air Force. Conceptually, it can also be held by a Naval component indicating that these shortcomings are not unique to the US Air Force. This viewpoint does not mean that US Air Force or Naval air control priorities need to change since they are optimized for the full spectrum of a robust conventional battlespace. Instead, the divestiture of requirements to support low-end warfare to components of the armed forces that are more invested in COIN and stability operations is a better solution.

Traditionally, the brunt of these operations has fallen upon land components that are comprised mostly of Army, Marine Corps, and special operation forces units. Since air support is ultimately to further or support ground objectives in COIN and stability operations directly, this is where low-end air capability should reside. For instance, the Army views its aviation assets as another unit within the ground force.<sup>23</sup> The result is that Army aviation elements exercise lower levels of coordination when compared to CAS procedures in what was formerly referred to as close combat attack.<sup>24</sup> JP 3-09.3 states the following:

USA [US Army] AH [Attack Helicopter] units support maneuver commanders as a subordinate maneuver unit. They are given mission type orders and execute these orders as a unit. USA AH units can conduct attacks employing CAS TTP [tactics, techniques, and procedures] when operating in support of other forces. However, their proficiency will be limited unless they have been trained as part of SOF [special operations forces] or CAS TTP have been coordinated in advance.<sup>25</sup>

The main difference is that Army aviation and rotary-wing five-line CAS briefs are friendly-centric, whereas, in most CAS procedures, they are target-centric.<sup>26</sup> In effect, the priority of an Army or rotary-wing asset is to ascertain with high confidence friendly position(s) before employment. Also, Army aviation does not require a specialized controller, known as a joint terminal attack controller (JTAC), or the clearance to release munitions while operating organically, potentially reducing kill-chain timelines. With organic use, any individual with a radio can request fires with no specific training. When supporting outside units, Army aviation utilizes JP 3-09.3 procedures. The most efficient procedure is the Army aviation or special operations force (SOF) call-for-fire (CFF) that is modeled after the artillery CFF format and does not require a JTAC to execute. A ground unit requesting fire could also utilize the rotary-wing five-line CAS brief, similar to a CFF. However, it requires a separate clearance be given (by a JTAC) in addition to the five-line CAS brief to authorize munition expenditure.<sup>27</sup>

The Air Force has one asset that utilizes SOF and Army aviation CFF procedures—the AC-130 gunship. The AC-130 is enabled through its twin high-fidelity electro-optical sensors, orbit, and gyro-stabilized direct-fire artillery plat-

form. But Air Force AC-130s are primarily used by special operations, and their use to support conventional units is not the norm. The fluid and flexible response SOF and Army aviation procedures offer seem ideally suited in an irregular environment where flexible and adaptable responses are required. While traditional fixed-wing strike assets performing CAS can perform similar procedures, it is typically associated with emergency CAS (E-CAS) scenarios with an increased risk of fratricide. In these *extremis* situations, aircrew assumes all responsibility for ensuring deconfliction from friendly ground forces before releasing ordnance. It is considered a deviation from normal JP 3-09.3 procedures.

Another type of mission executed in low-end warfare is high-value individual (HVI) and high-priority human target (HPHT) targeting. These missions are typically associated with special operations that fall under the purview of Special Operations Command (SOCOM). While SOCOM is comprised of US Air Force, Army, Navy, and Marine Corps assets, the Air Force contributes the predominance of air capability through its Air Force Special Operations Command (AFSOC). Within AFSOC, the Air Force supplies specialized intelligence, surveillance, and reconnaissance (ISR) aircraft, including armed variants, attack consisting of AC-130 gunships, and lift. In terms of air support, the Army supplies specialized rotary-wing (non-tiltrotor) assets through the 160th Special Operations Aviation Regiment (SOAR).

If the US Air Force desires to maintain relevancy in the low-end, then AFSOC is where it should invest its capability. However, the Army's 160th SOAR is an equally opportune location to place dedicated special operations light-attack and tactical ISR support. In 2017, Sen. John McCain published a budgetary white paper titled "Restoring American Power." He argued the need for the US Air Force to procure 300 light-attack aircraft, 200 by 2022, to preserve the fleet life of existing 4th and 5th generation fixed-wing platforms while maintaining capability in low-end conflicts.<sup>28</sup> The likely light-attack procurement cost is between \$6–\$7.5 billion, not including aircrew training requirements or operational costs.<sup>29</sup> Instead, the US Air Force has opted for a more measured approach, agreeing to buy a handful of planes for Air Combat Command and AFSOC.<sup>30</sup> The focus appears to be on programs that will be geared toward building partner capacity through tactics development and airborne advisor integration.<sup>31</sup> Building capacity in partner-nation air forces is important in building host government credibility and capability for eventual self-sustainment.<sup>32</sup> While this is an ideal mission for the US Air Force advisors, it does not solve the close-in support requirement for conventional ground forces. Also, increasing coverage of conventional ground forces by AC-130 gunships would remain inadequate due to their limited availability.

If the Air Force does not wish to maintain any capability in low-end conventional operations, it should divest its air advisor mission to the Army. The Army already maintains a robust aviation advisor mission, focused on rotary-wing. Since the Army is also training host-nation forces in COIN and stability operations, adding light-attack may help ground and aviation forces better integrate by uniting under a unified doctrine.

Instead of trying to reconcile the criticisms, the US Air Force should drop its aversion to the Army operating fixed-wing light-attack. Critics may fear an erosion of US Air Force relevance and opening Pandora's Box regarding the Army attempting to take more and more airpower roles under its cognizance. However, they only need to look at history when airpower advocates and Army staff argued the true purpose of airpower. The Army's desire for airpower is to facilitate close-in support of ground maneuver elements and further its function of land dominance. DoDD 5100.01 lists some of the Army's functions are to "conduct prompt and sustained combined arms combat operations on land in all environments and types of terrain, including complex urban environments, in order to defeat enemy ground forces, and seize, occupy, and defend land areas" and "interdict enemy sea, space, air power, and communications through operations from or on the land."<sup>33</sup> These functions can be interpreted to mean that while the Army may utilize organic air assets, using air assets is strictly for furthering land dominance missions. The reason Air Force relevance is not in question is because the interdiction of enemy elements not related to close-in support of a ground force maneuver engaged in a land campaign (e.g., targets beyond the FSCL) falls under the purview of the air component.<sup>34</sup> Furthermore, the overall responsibility for airborne logistical support is specifically delegated to the US Air Force.<sup>35</sup>

The precedence for the divestiture of capability is already set. Ceding the MC-12 ISR aircraft to US Army control, once operated by the Air Force, shows that the Army has the capacity and capability to absorb airpower missions.<sup>36</sup> In fact, the transfer of MC-12 assets to the Army was described as "seamless" and resulted in no mission interruptions.<sup>37</sup> Additionally, the Army operates armed ISR capability with MQ-1C Gray Eagle drones. The ability of the Army to absorb and perform airpower missions, while maintaining mission effectiveness in low-end operations, lends credibility to the argument that a return to specialization within the service components is warranted to cover the full spectrum of warfare.

### **Specialization Versus Multirole**

The spectrum of warfare spans from the low-end to high-end. COIN, counterterrorism, and stability operations are characterized by permissive environments and fall into the low-end of the spectrum of warfare.<sup>38</sup> Permissive environments



lack conventional air-to-air threats, and surface-to-air threats consist of man-portable air defense systems (MANPAD) and/or light air defense artillery. Friendly forces maintain air superiority, if not supremacy. While the land domain may be contested, air, space, and cyberspace domains are largely uncontested. This operating environment has been the assumed baseline for most environments in the War on Terror. The nature of this environment makes low-altitude systems the most vulnerable, with higher flying platforms minimizing or avoiding threats through altitude sanctuaries in the battlespace. For these reasons, strike and medium-to-high altitude remotely piloted aircraft (RPA) are usually operating at low risk. Consequently, the risk to the mission from hostile fire is low for fixed-wing aircraft, while rotary-wing aircraft may experience elevated risk levels in this environment.

High-end warfare is characterized by countering anti-access/area denial threats.<sup>39</sup> Adversaries can contest many or all of the domains simultaneously with integrated air-defense systems and military capabilities in land, sea, air, space, and cyberspace. High-end warfare can be thought of as warfare with modern, state militaries in direct confrontation with one another.<sup>40</sup> The upper-low segment of the spectrum can be thought of as *hybrid warfare* where state actors may supply advanced weaponry to forces (proxies) that they would not possess otherwise, or that utilize weapons captured from state militaries (as is the case with the Islamic State in Iraq and Syria [ISIS]).<sup>41</sup>

Colonel Wilkinson and Dr. Hill's article from 2017 illuminates the dilemma some circles within the US Air Force are experiencing. Their article portrays an Air Force that is on the path to irrelevance by prioritizing high-end specialization while ignoring the low-end. Cited as evidence was the divestiture of MC-12 reconnaissance aircraft and the near-retirement of A-10s before congressional intervention. These events illustrate Air Force management was indeed prioritizing specialization into the high-end with the long-term focus being on peer competitors.<sup>42</sup> Meanwhile, both Colonel Wilkinson and Dr. Hill contend that the US Air Force ignoring the low-end conflicts and not investing in specialized, cheaper technologies imperils its relevance and places American strategic objectives at risk. This is a narrow viewpoint. It places the US Air Force as the sole proprietor of airpower capability and ignores the joint force as whole. High-end capabilities are expensive in terms of time to develop, resources (including manpower), and money, but necessary. Research and development costs have been steadily marching upward throughout history and have been making up larger percentages of expenditures on weapon programs. Further, high-end requirements are necessitating the return of specialization not only in terms of platforms but also in terms of missions.

For example, an article in *Military Review* discussed how US Air Force multirole aircraft were larger than necessary, overly complex, and costly despite on-

board technology designed to mitigate capability gaps.<sup>43</sup> Multirole is an attempt at economy by requiring aircraft and operators to be capable of multiple missions; however, this reduces combat effectiveness since neither the platform nor the operator is optimized for any particular requirement. This reduction in effectiveness makes it less likely that the force will accomplish the combatant commander's mission objectives.<sup>44</sup> It is precisely for these reasons that the US Air Force needs to focus on the high-end capability since specialization in this area ensures the ability to dominate complex-networked battlespaces. Colonel Wilkinson and Dr. Hill are right that the United States cannot afford to ignore low-end warfare without seriously jeopardizing strategic security and the ability to win future conflicts. However, the US Air Force should not and does not need to shoulder this burden alone, nor should it seek capabilities that overlap with other forces within the joint force.

When examining the DoDD 5100.01, it may appear that it is directing overlapping capabilities regarding CAS. It lists CAS as a US Air Force, Navy, and Marine Corps mission. Maintaining capabilities in CAS does not equate to the requirement to maintain specialized assets to perform the mission.<sup>45</sup> Instead, the interpretation is that when required, US airpower shall be able to integrate effectively and further a ground force commander's objective while enemy forces are within proximity to friendly positions. To be effective, airpower needs only to deliver effects on target when called upon. Korea, Vietnam, and both Gulf Wars utilized existing aircraft to support CAS missions and were largely effective. A myth developed during the Korean War: the Army believed that propeller aircraft, like the outmoded F-51 (formerly the P-51), were better CAS and ground support platforms.<sup>46</sup> This belief was due to the initial basing of jets at the limits of their endurance, defective ordnance, and air control construct.<sup>47</sup> In reality, jet aircraft proved to provide higher readiness rates, greater survivability, and once bases were moved closer, identical loiter capability.<sup>48</sup> The success of the F-51 and similar propeller platforms was only possible through Allied air superiority, a prerequisite with any modern battlefield requiring CAS.

The F-16, F-15, and F/A-18 have performed CAS adequately, and upgraded weapons, developed mostly out of necessity with targeting within urban centers, have improved their accuracy and effectiveness. Even strategic bombers (e.g., the B1-B and B-52) demonstrated limited capability in CAS in Afghanistan and, most recently, against the Islamic State. The F-35, the newest arrival to the US military air arm, has had its utility in CAS questioned due to flight profiles dictated by its preferred tactics, techniques, and procedures. Additionally, its sensor suite is not optimized for close-in support. Nonetheless, it has been shown capable of executing airstrikes in support of ground forces in addition to a host of other capabilities for which it was explicitly designed.<sup>49</sup> At issue is the expense of the

utilized platforms and the flexibility of the current air control construct when applied to the low-end, since the majority of current and future Air Force platforms can conduct CAS and ground support missions when required.

In high-end warfare against a peer adversary, there may be situations where the only survivable and effective aircraft are fifth-generation platforms because air superiority is temporary and localized. A scenario in which high-end CAS is required is a defensive one where friendly forces do not hold the initiative and are operating reactively. For example, the first and second phases of the Korean War were periods that necessitated CAS to repel large-scale assaults and prevent friendly forces from being overrun. During the second phase, the enemy leveraged geopolitical boundaries by staging supply lines and airbases on the Chinese side of the Yalu River, a no-go area for US and United Nations forces.<sup>50</sup> A similar environment exists today in eastern Ukraine, where the fear of escalation puts geopolitical boundaries on airpower that allow for havens of enemy strategic surface-to-air systems and fighter bases. Russia supplied and, in some cases, operated surface-to-air systems to provide defensive umbrellas from their territory to support government-backed insurgents.<sup>51</sup> This scenario would require low-observable platforms if US ground forces were involved.

The Army desires a flexible and visible airpower presence that has sufficient loiter, weapons payload, and austere operations capability. In other words, the Army seeks operational control of low and slow “bomb trucks” and surveillance platforms. These platforms would possess the capability to be forward-deployed in austere conditions to allow for distributed airpower coverage and in which the visible presence of airpower alone may be sufficient to rally friendly troops while simultaneously demoralizing the enemy. Presently, the Air Force has been favoring relatively fast and stealthy platforms for its strike and fighter aircraft. While these aircraft have demonstrated capabilities in ground support functions, their preferred tactics and weapons necessitate higher employment altitudes, speed, and greater standoff to maximize survivability. Also, these platforms typically require extensive logistics to operate. The Air Force viewpoint is that with the proliferation of advanced threats, lower and slower aircraft (the type the Army has traditionally championed) lack satisfactory survivability in environments other than permissive. There is data to support this viewpoint. In Korea, low-flying F-51s performing close-in support missions suffered the highest US Air Force loss rates of any other aircraft.<sup>52</sup> Since Korea, the predominance of US Air Force air combat losses has been due to ground fire.<sup>53</sup> The lower and slower an aircraft flies, the more vulnerable it is to ground fire consisting of small arms, MANPADs, and air defense artillery.

Advancements in aircraft sensors and guided low-collateral weapons have mitigated some of the requirement for close-in support aircraft to routinely fly at low altitudes. Previously, unguided weaponry and the lack of sophisticated electro-optical sensors required pilots to employ closer to targets to increase accuracy and minimize the dispersion of gun systems; this also reduced the chances of fratricide. Requirements to be low and close naturally led to lower operating airspeeds and increased vulnerability. The option now exists, for what historically would have been more vulnerable aircraft, to employ at increased standoff ranges without sacrificing accuracy. The problem is that when standoff or stealth are not required, and there is a desire or need to move a platform closer to targets or troops, only two aircraft in the US Air Force—the A-10 and AC-130—are explicitly designed with that capability in mind.

In May 2018, the Mitchell Institute published an article on the light attack program. In it, the author examined the many benefits of utilizing specially procured light-attack aircraft for low-end conflicts. The article noted, “The attributes of light combat aircraft—tremendous endurance, respectable weapons loads, high weapons delivery accuracy, ability to operate from austere locations, and low acquisition and operational costs—make them an excellent choice for today’s low-intensity conflicts.”<sup>54</sup>

Examining how airpower has been applied during the past two decades, one can see the potential savings for the US military. Traditional Air Force strike-fighter assets have required aerial refueling support, established bases with infrastructure, high operational costs, and experienced erosion of the assets’ fleet life. By comparison, a light-attack aircraft can be flown for anywhere between \$2,000–\$2,800 per flight hour compared to \$19,168 per flight hour for an F-16C.<sup>55</sup> Additionally, existing fixed-wing light attack platforms (e.g., A-29 and AT-6B) have an internal fuel endurance of 2.6 hours that can be increased to 7.1 hours by adding external fuel tanks at the expense of combat load.<sup>56</sup> A light-attack aircraft’s speed, payload, and altitude capability allow it to affect targets beyond the reach of a rotary-wing attack. Since 2016 within Afghanistan, the Afghan Air Force has been using its relatively small fleet of A-29s to good effect while suffering no combat losses. To date, Afghan A-29s have conducted 311 successful strikes with 2,427 enemy troops killed in action and zero incidents of fratricide.<sup>57</sup> More importantly, these strikes have no reported incidents of civilian casualties.<sup>58</sup>

In COIN and stability operations, tactical ISR is just as important as dedicated CAS assets.<sup>59</sup> It is not unusual for airborne strike aircraft to fly nontraditional ISR (NTISR) missions when higher priority taskings do not exist. This mission makes for an expensive ISR platform and one not optimized for the role. Light-attack aircraft (i.e., A-29 or AT-6B) can be utilized to fly NTISR missions at an hourly

cost similar to MQ-9 Reapers and with greater loiter time than conventional strike-fighter aircraft (when combat load is reduced to facilitate carrying additional fuel).<sup>60</sup> While using RPA may seem like an attractive solution for most COIN and stability airpower requirements, it is important to note RPA strengths and shortcomings. The Mitchell Institute article noted:

The advent of the armed RPA, such as the MQ-9 Reaper, provides an astounding ability to target high-value targets that are time-critical, fleeting, or are identified with no other strike assets in proximity to respond. However, using RPA as a tool of first choice for routine light-attack missions risk undermining other vital mission imperatives fulfilled by these aircraft.<sup>61</sup>

RPAs provide a level of persistent loiter, low acoustics, and high-fidelity sensors that are more aptly suited for collecting intelligence or locating and finishing higher priority targets. In COIN and stability operations, these targets are typically HVIs and HPHTs. As a manned platform, light-attack aircraft are not as susceptible to weather or threats when compared to a RPA, capable of modifying their flight profiles to avoid weather or defend against threats.<sup>62</sup> This distinction makes light-attack better suited to prosecute the majority of targets associated with conventional ground operations not necessarily tied to HVI or HPHT targeting.

## **Conclusion**

Specialization and the elimination of unnecessary capability overlap between the services will result in a more efficient and effective joint force. As the US military retools for peer competition, it is important to maintain capability in the low-end as these types of conflicts are likely to persist in the future. Also, ignoring the low-end provides an asymmetric advantage to peer adversaries who may employ hybrid warfare to exploit the perceived vulnerabilities. Lessons from COIN and stability operations have shown that the Army's theory of airpower is most applicable to the low-end as these conflicts lack strategic targets when referencing conventional definitions for Air Force air control construct to be truly effective. Instead, administrative and operational control of close-in direct support assets resting with the land component, for low-end warfare, is more effective.

In more traditional warfare, a high-low mix of aircraft is required to ensure the economical prosecution of any future war.<sup>63</sup> Conceivably, once air superiority is established, US Air Force assets would be conducting air interdiction and air superiority missions beyond the fire support coordinating line (FSCL). Concurrently, Army rotary-wing and light-attack aircraft would prosecute targets short of the FSCL in close-in support of ground forces with Air Force assets augmenting where required. Senator McCain advocated the procurement of 300 light-

attack aircraft to rebuild American military power, but the US Air Force should not fulfill this order. Instead, limited procurement to fulfill its advisor missions, as it already has, is the extent to which the Air Force should wade into low-end capabilities if it does not divest this capability altogether to the Army. The predominance of the remaining light attack numbers should go to Army aviation with the 160th SOAR or AFSOC procuring small numbers for direct special operations support. In this way, the US military can ensure responsive, flexible, and effective airpower delivered to ground commanders in direct or close-in support roles at a fraction of the cost. Should the Air Force maintain its resistance to the Army possessing fixed-wing light attack, the fleet life of high-end assets will continue to erode, and providing tailored airpower to ground commanders in COIN and in stability operations will remain difficult. In consequence, the fears of Colonel Wilkinson and Dr. Hill will take a breath; a low-end capability gap is ripe for any adversary to exploit. ★

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Lieutenant Commander Phillips-Levine (BS, US Merchant Marine Academy) is an active duty F/A-18 pilot and squadron department head with 12 years of service in the US Navy. Lieutenant Commander Phillips-Levine has served as a joint terminal attack controller and fires support officer with Naval Special Warfare (NSW) and deployed with Special Operations Task Force–West in support of Operation Inherent Resolve. While serving with NSW, he worked closely with various air and ground entities, including Air Force Special Operations Command, Air Force Weapons School, and Marine Special Operations Command.

#### **Notes**

1. Lt Col Michael Buck, USAF, retired, “Light Combat Aircraft: Looking at O/A-X and Beyond,” Mitchell Institute Policy Papers 11, May 2018, 2, <http://docs.wixstatic.com/>.
2. Luke Strange, “A Troubling Outlook for Future Defense Spending,” *Real Clear Defense*, 6 November 2018, <https://www.realcleardefense.com/>.
3. Paul Scharre, “Spectrum of What?,” *Military Review*, November–December 2012, 73, <https://www.armyupress.army.mil/>.
4. LTC Michael J. Chandler, *Gen Otto P. Weyland USAF: Close Air Support in the Korean War* (Maxwell AFB, AL: Air University Press, March 2007), 10.
5. Chandler, *Gen Otto P. Weyland USAF*, 10.
6. Chandler, *Gen Otto P. Weyland USAF*, 72.
7. Joseph Trevithick, “The OV-1 Mohawk Was One of the U.S. Military’s First Forgotten Light Attack Planes,” *The Drive*, 12 July 2018, <https://www.thedrive.com/>.
8. Alfred Goldberg and Lt Col Donald Smith, “Army-Air Force Relations: The Close Air Support Issue,” *United States Air Force Project Rand*, October 1971, 49, <https://www.rand.org/content/>.
9. Joint Publication (JP) 1, *Doctrine for the Armed Forces of the United States*, IV-16, <https://www.jcs.mil/>; and Department of Defense Directive (DoDD) 5100.01, “Functions of the Department of Defense and Its Major Components,” 21 December 2010, 25, <https://www.esd.whs.mil/>.
10. JP 3-09, *Joint Fire Support*, A-5, 10 April 2019.

11. JP 3-09, *Joint Fire Support*, A-5.
12. JP 3-09, *Joint Fire Support*, A-5.
13. JP 3-09.3, *Close Air Support*, III-59, 10 June 2019; and JP 3-09, *Joint Fire Support*, A-5.
14. Kenneth Condit, *History of the Joint Chiefs of Staff—The Joint Chiefs of Staff and National Policy*, Vol. II, 1947–1949 (Washington, DC: Office of Joint History, 1996), 93.
15. “White Paper: Evolution of Department of Defense Directive 5100.01,” Office of the Secretary of Defense, Revised January 2014, 21.
16. Bob Taradash et al., “Zone Defense: A Case for Distinct Service Roles and Mission,” *Disruptive Defense Papers*, *Center for New American Security*, January 2014, 8, <https://www.cnas.org/>.
17. Marcus Weisgerber, “U.S. Lawmaker Threatens to Give the Next Attack Plane to the Army,” *Real Clear Defense*, 12 September 2019, <https://www.realcleardefense.com/>.
18. Fleet Marine Force Reference Publication (FMFRP) 12-18, “Mao Tse-tung on Guerrilla Warfare,” 5 April 1989, 7, <https://www.marines.mil/>.
19. FMFRP 12-18, “Mao Tse-tung on Guerrilla Warfare,” 20.
20. JP 3-09.3, *Close Air Support*, xi.
21. Col Jon C. Wilkinson and Dr. Andrew Hill, “Airpower against the Taliban: Systems of Denial,” *Air & Space Power Journal (ASPJ)* 31, no. 3, 50, <https://www.airuniversity.af.edu/ASPJ/>.
22. Wilkinson and Hill, “Airpower against the Taliban,” 53.
23. Maj Patrick Ryan Wilde, “Close Air Support Versus Close Combat Attack,” United States Army Command and General Staff College, 2012, 38, <https://sobchak.files.wordpress.com/>; and JP 3-09.3, *Close Air Support*, III-86.
24. Wilde, “Close Air Support Versus Close Combat Attack,” 42.
25. JP 3-09.3, *Close Air Support*, III-86.
26. JP 3-09.3, *Close Air Support*, III-91.
27. JP 3-09.3, *Close Air Support*, III-91.
28. Sen John McCain, “Restoring American Power,” *Future Defense Budget Recommendations*, 16 January 2017, 12, <https://news.usni.org/>.
29. Betsy McDonald, Sierra Nevada Corporation, message to the author, email, 26 September 2019.
30. Aaron Mehta, “US Air Force Officially Buying Light-Attack Planes,” *DefenseNews*, 25 October 2019, <https://www.defensenews.com/>.
31. Mehta, “US Air Force Officially Buying Light-Attack Planes.”
32. Maj Michael M. Trimble, *Asymmetric Advantage: Air Advising in a Time of Strategic Competition*, LeMay Paper no. 5 (Maxwell AFB, AL: Air University Press, August 2019), 83, <https://www.airuniversity.af.edu/AUPress/>.
33. DoDD 5100.01, “Functions of the Department of Defense and Its Major Components,” 30.
34. JP 3-09, *Joint Fire Support*, A-5.
35. DoDD 5100.01, “Functions of the Department of Defense and Its Major Components,” 34.
36. Wilkinson and Hill, “Airpower against the Taliban,” 54.
37. SSgt Torri Ingalsbe, “ISR Aircraft Hones in on Strategic Agility,” USAF, 10 November 2014, <https://www.af.mil/>.
38. Scharre, “Spectrum of What?,” 73.
39. Scharre, “Spectrum of What?,” 73.
40. DoDD 3000.07, “Irregular Warfare (IW),” 12 May 2017, 14, <https://www.hsdl.org/>.
41. Scharre, “Spectrum of What?,” 78.

42. Wilkinson and Hill, "Airpower against the Taliban," 48; and Ingalsbe, "ISR Aircraft Hones in on Strategic Agility."
43. Maj John Q. Bolton, "Precedent and Rationale for an Army Fixed-Wing Ground Attack Aircraft," *Military Review*, May–June 2016, 79, <https://www.armyupress.army.mil/>.
44. Maj Kamal J. Kaaoush, "The Best Aircraft for Close Air Support in the Twenty-First Century," *ASPJ* 30, no. 3, 50, <https://www.airuniversity.af.edu/ASPJ/>.
45. DoDD 5100.01, "Functions of the Department of Defense and Its Major Components," 31–32, 34.
46. Chandler, *Gen Otto P. Weyland*, 41.
47. Chandler, *Gen Otto P. Weyland*, 41–42.
48. Chandler, *Gen Otto P. Weyland*, 42.
49. Tara Copp and Valerie Insinna, "Marine Corps F-35 Flies First Combat Mission in Afghanistan," *MilitaryTimes*, 27 September 2018, <https://www.militarytimes.com/>.
50. Chandler, *Gen Otto P. Weyland*, 27, 29–30.
51. David M. Herezenhorn and Peter Baker, "Russia Steps Up Help for Rebels In Ukraine War," *New York Times*, 25 July 2014, <https://www.nytimes.com/>; and Mike Corder, "4 Charged in Downing of Malaysian Airliner over Ukraine," 19 June 2019, <https://apnews.com/>.
52. David Legg, "Aircraft Survivability—The Korean War," *JASP Online Journal*, accessed 16 December 2018, <http://jasp-online.org/>.
53. Dr. Daniel Haulman, *No Contest: Aerial Combat in the 1990s* (Maxwell AFB, AL: Air Force Historical Research Agency, 2015), 8, <https://www.afhra.af.mil/>.
54. Buck, "Light Combat Aircraft," 4.
55. Buck, "Light Combat Aircraft," 8; and Jim Ickes, Sierra Nevada Corporation, A-29 Logistics vice president, message to the author, email, 27 August 2019.
56. "Built for the Mission," A-29 company website, n.d., accessed 18 August 2019, <http://www.builtforthemission.com/>.
57. Trimble, *Asymmetric Advantage*, 85.
58. Trimble, *Asymmetric Advantage*, 85.
59. Wilkinson and Hill, "Airpower against the Taliban," 54.
60. Winslow Wheeler, "2. The MQ-9's Cost and Performance," *Time*, 28 February 2012, <http://nation.time.com/>.
61. Buck, "Light Combat Aircraft," 11.
62. Capt James Schmitt and Capt John Taylor (USAF MQ-9 pilots), interview by the author, 9 September 2019.
63. Scharre, "Spectrum of What?," 78.