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Closing the Irregular Warfare Air Capability Gap

The Missing Puzzle Piece: Rugged Utility Aircraft and Personnel

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As the Air Force considers its future concept of irregular warfare (IW), an introspective look at the past sheds light on multirole airpower ideas that apply today and that will remain in effect tomorrow. Presently a gap exists between the Air Force's IW doctrine and its capability. We now have an opportunity to strike a balance between maintaining overwhelming conventional airpower and creating an IW force capable of building partner capacity (BPC) in developing nations, giving them the appropriate resources and training to do the job right. Historically, the Air Force has never had much interest in maintaining a fleet of inexpensive, multirole, low-technology aircraft for counterinsurgency (COIN) and BPC. Since the days of Billy Mitchell, American airpower has emphasized technology that supports an inherently offensive and manifestly strategic outlook, thereby justifying the Air Force's existence as an independent military branch.[1] This ingrained service culture has persisted despite evidence that the Air Force also needs to become proficient in IW.[2] The service finds itself

struggling to acknowledge IW yet maintain a decisive advantage in conventional war. The Air Force did not plan for and was slow to recognize the IW demands of the current conflicts in Iraq and Afghanistan, which have created an urgent need to establish a more capable force. Aside from the 6th Special Operations Squadron (SOS), the Air Force has no means of performing simultaneous IW and BPC. Unfortunately, the 6th SOS, which has consistently faced opposition from conventional-minded aviators and other special operators, still lacks the staff and equipment that its founders envisioned.[3]

However, under Gen Norton Schwartz, current chief of staff of the Air Force, Airmen are at least discussing new IW concepts that involve evaluating small rotary- and fixed-wing airlift and light attack aircraft which both the Air Force and partner nations can operate.[4] Even though some reports suggest that, upon further evaluation, General Schwartz has abandoned the light attack and light airlift aircraft in favor of relying upon platforms already serving in the general-purpose forces, the Air Force will solicit bids to buy 15 light strike and surveillance aircraft for use as trainers for BPC.[5] Unfortunately, this does not approach the robust standing force capable of handling IW and BPC challenges worldwide that we will need. Major obstacles include a limited budget and restrictions on additional personnel end strength. In particular, the Air Force must overcome its tendency to develop an expensive technological solution, opting instead to build expanded capability by using experienced Air Force personnel to cross-train as air advisers who operate and maintain IW aircraft with partner nations. The IW effort needs multirole aircraft that are cheap, durable, versatile, and capable of short takeoff and landing (STOL). In the 1990s, creators of the 6th SOS suggested some proven, excellent platforms that could fulfill these roles.

Specifically, the Pilatus PC-6 Turbo Porter and the Basler BT-67 (a reengineered Douglas DC-3), available virtually off the shelf, meet the aforementioned requirements. The Air Force should develop and maintain a standing force of aircraft such as the PC-6 and BT-67, which can perform functions such as airdrop or airland and then quickly refit to conduct intelligence, surveillance, and reconnaissance (ISR) as well as light attack. Their versatility allows them to operate in remote areas with minimal support. Rugged and reliable, they are ideal aircraft for the IW mission. This robust standing IW force, equipped with a family of inexpensive aircraft designed to meet a variety of COIN requirements, should be manned by personnel who have proper COIN education and language training. This proposal would allow the Air Force to recover from the lack of foresight in Iraq and Afghanistan yet stand prepared to intervene proactively in future IW conflicts.

Special Operations Aviation: A Legacy of Neglect

Even though the US Army recorded the first use of aircraft in an irregular campaign (the 1916 Mexican Punitive Expedition), the US Marine Corps foresaw the utility of airpower as a niche capability.[6] Army aviators such as Mitchell and Benjamin Foulois entered World War I with the idea that airpower could make a decisive difference in conventional warfare. These men wanted the maximum number of air striking forces under the command of an air officer so as to obtain operational- and even strategic-level effects beyond the mere support of ground troops.[7] This vision was the genesis for justifying a separate Air Force; Airmen left behind any desire to employ airpower in IW. Airmen preferred not to participate in any airpower operation other than a strategic one. Unlike their counterparts in the Army Air Service, however, Marine Corps officers believed that aviation fulfilled a supporting role and emphasized IW to justify the Corps' continued existence.

Between the world wars, US Army Air Corps leaders envied the British Royal Air Force, which had gained its independence

in March 1918.[8] Brigadier General Mitchell realized he would have to prove that American airpower's offensive and strategic attributes justified institutional independence as well. Thus, upon entering World War II, the US Army Air Forces intended to use unescorted strategic bombing to strike enemy vital centers. After the bombers suffered appalling losses to the Luftwaffe, Army Air Forces leaders successfully altered their bombing strategy to include long-range fighter escort. However, the Pacific theater proved the largest stage for displaying the decisiveness of airpower, with the strategic bombing of Japan culminating in the delivery of two atomic weapons. Ultimately, the decisiveness of strategic bombing in World War II warranted creation of an independent Air Force in 1947.

These events set the strategic bombing paradigm for the Air Force, and the new service generated doctrine and policy to support this perception, to the detriment of any activity considered irregular. However, even a vast conventional effort such as World War II required IW, and the Army Air Forces initially found itself unprepared. In the Pacific theater, the First Air Commando Group performed a daring glider operation in conjunction with British special forces behind Japanese lines in Burma—a resounding success; nevertheless, conventional forces absorbed the group at the end of the war.[9] An Air Force built around state-of-the-art strategic bombing had little room for aircraft that conducted IW. According to prevailing thought, an Air Force prepared for large-scale conventional or nuclear war could certainly handle any small war or irregular conflict. However, in Korea the Air Force built three wings dedicated to irregular operations, only to deactivate them in 1957.[10] The service repeated this cycle of creating irregular squadrons for specific conflicts and dismantling them afterwards. In the early 1960s, under pressure from Pres. John F. Kennedy to create a "specialized capability for COIN," the Air Force created the 4400th Combat Crew Training Squadron, nicknamed "Jungle Jim" at Hurlburt Field, Florida.[11] Organized, trained, and equipped with World War II aircraft and gear, the unit sought to shoulder the mounting burden of COIN in Vietnam. A detachment of this unit deployed to South Vietnam to build and train an indigenous air force under the code name "Farmgate."[12] It performed adequately, but as the conflict grew, so did demands, until the entire effort shifted from a foreign internal defense (FID) mission with the South Vietnamese Air Force to a conventional effort conducted by the US Air Force. By 1965 the special air warfare effort had shifted its focus to supporting the vast conventional ground effort in Vietnam.[13] However, in 1974 special air warfare squadrons had dropped from a peak of 19 flying squadrons possessing 550 aircraft and 5,000 personnel to fewer than 40 aircraft total.[14] The Air Force should have learned from its Vietnam experience that airpower, though critical in small wars, is only one variable in a complex joint environment. Regardless, the service's leadership believed that in all cases, conventional airpower represented the decisive factor in warfare, provided the political masters imposed no restraints.

The lack of emphasis on irregular airpower reached a pinnacle in April 1980 with the Desert One hostage-rescue disaster in Iran, during which a Marine Corps helicopter crashed into an Air Force MC-130, killing eight Americans. A subsequent review of the mission laid the foundation for creation of Air Force Special Operations Command (AFSOC). By 1986 Congress had decided to reform the military in general by passing the Goldwater-Nichols Department of Defense Reorganization Act, which led to formation of the joint United States Special Operations Command (USSOCOM) in 1987, followed three years later by AFSOC.[15]

Within the first few years of its existence, AFSOC established the 6th SOS, dedicated to FID.[16] Despite this charter, the squadron remained at odds with USSOCOM leaders, who continued to neglect the FID mission throughout the 1990s.[17] The 6th SOS faced difficulty obtaining resources from AFSOC,

USSOCOM, and the Air Force. Nevertheless, over time it acquired more than 100 personnel and leased various aircraft prevalent in air forces worldwide. The concept entailed acquiring experienced instructor pilots, maintenance personnel, and other Air Force specialists and then training them in the sustainment and employment of aircraft commonly found in partner nations. This cadre of personnel received extensive language, culture, and COIN training before deploying to a partner nation to prepare its air force to better perform internal security functions. Founders of the 6th SOS envisioned a family of aircraft, including the versatile Pilatus PC-6 and Basler BT-67, among others.[18] Although acquisition of those planes proved politically unsustainable at the time, these types of aircraft would have supported solid concepts of IW. Unfortunately, for many years the 6th SOS did not expand significantly. The *Quadrennial Defense Review Report* of February 2010 identified a "persistent shortfall" of capability for training partner aviation forces, and, as a result, the Department of Defense will double its current capacity by 2012.[19] Yet, even this increase is modest because the tiny 6th SOS must cover aviation FID for the entire world. Clearly, the squadron is much too small to perform its mission, as evidenced by our experience in Iraq and Afghanistan.

How Critical Is It?

The demand for aviation FID and BPC continues to grow as the United States remains embroiled in two irregular conflicts in Iraq and Afghanistan, and as other small wars seem imminent. Although BPC activities are growing in importance, the Air Force's efforts remain ad hoc and late to the game. In both Iraq and Afghanistan, no comprehensive airpower strategy anticipated the need for IW or BPC upon completion of major combat operations. Dedicated progress with regard to indigenous air forces in those countries has occurred only recently—an effort undermined by the lack of concentration on IW and BPC in the Air Force before 2001.[20]

Iraq and Afghanistan suffer from a lack of airpower expertise, infrastructure, training, and the economic sustainment necessary to rebuild an air force, yet both need immediate air support for their daily COIN operations. Therefore, the US Air Force has provided the lion's share of air support for COIN functions of both the United States and partner nations. Unfortunately, modern air forces are expensive and complex, requiring intensive training programs to perform effectively, and their development takes time—a commodity that neither country has in abundance. Iraq and Afghanistan need personnel and aircraft capable of performing important COIN tasks—"small vertical [rotary] and fixed wing lift, and light attack"—and, more importantly, "armed overwatch," which provides persistent ISR capability and the ability to attack, all in one platform.[21] Personnel who operate these aircraft must understand COIN theory, lest they do more harm than good. The Air Force must instill in them proven COIN airpower concepts such as maintaining flexibility and initiative by surprise, as well as minimizing collateral damage.[22] The aircraft that these Airmen operate must be affordable, versatile, durable, rugged, and available for immediate employment.

In Iraq, Afghanistan, and elsewhere, such planes will operate with minimal maintenance support, often in remote areas without any infrastructure or even a runway. In addition, neither government can afford the high costs of operating jets. These fledgling air forces should therefore rely on simpler propeller-driven utility aircraft to conduct a variety of missions. That is not to say they should never possess jet aircraft but that they should prove themselves capable of operating and maintaining simpler multirole models for their internal security before establishing a more robust capability. The irregular air battle has no need for high-technology aircraft used to strike enemies decisively on a theater or global level. Rather, it requires relatively low-

technology aviation solutions to support ground troops fighting numerous, isolated small battles—a type of conflict that does not fit the conventional offensive, strategic, and independent paradigm to which the Air Force has subscribed for over 60 years.[23] That requirement is closer to the Marine Corps' emphasis on airpower to support ground troops. Even so, a successful outcome still relies upon two aspects of the Air Force paradigm: centralized control of air assets and leadership by an air-minded officer.[24]

Despite the Air Force's position as a clear world leader in technological airpower, it must embrace alternative and even low technology for the IW and BPC arenas.[25] The service should also emphasize irregular concepts and training as well as proven aircraft, based on the needs of partner nations.[26] Moreover, the Air Force must reevaluate its decades-old paradigm regarding conventional offensive airpower in the context of COIN.

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The Way Ahead

Before the Air Force can begin to meet the challenge of IW, it has to accept the fact that this type of warfare is here to stay; therefore, the service should constantly prepare for irregular conflicts and BPC. The Air Force has a history of creating ad hoc units for irregular operations, only to dissolve them after the need is no longer acute. Breaking this cycle requires an institutional paradigm shift that allows a more balanced regular and irregular force. As previously discussed, parity has never existed between the two types of forces because Air Force leaders have not recognized irregular forces as strategically important. Encouragingly, current service leaders have acknowledged IW as a strategically significant challenge and have published doctrine on the subject. Air Force Doctrine Document 2-3, *Irregular Warfare*, notes that "irregular warfare is sufficiently different from traditional conflict to warrant a separate keystone doctrine document. . . . We intend this doctrine document to be broad, enduring, and forward-looking."[27] Secretary of the Air Force Michael B. Donley and General Schwartz state that "the Air Force must balance the requirements levied upon airpower in IW with the concurrent need to maintain decisive advantage in conventional warfare."[28] This is critical to the Air Force's attempts to remain relevant to current and future conflicts while maintaining its conventional power. Although general in nature, its IW doctrine lays a solid framework of key airpower functions such as FID and BPC. Obviously, then, the Air Force should build an organization based on irregular concepts and equipped to implement the envisioned doctrine. It is encouraging, however, that the chief of staff has given credence to the possibility of a paradigm shift occurring in the service.

Such a shift would not suggest that conventional airpower is no longer important to national defense but that we need a more balanced force able to carry out both regular and irregular operations. Still conceptual, the envisioned irregular force nevertheless lies within the realm of possibility for the world's most powerful air force. Before it can create that IW force, however, the Air Force must overcome its institutional predilection for "technology, individualism, and dogmatic theories."[29] Some proposals suggest creating two Air Forces—one based on cutting-edge airpower and dedicated to deterring peer competitors, the other based on proven technologies and concepts for IW.[30] In truth, we can build an irregular force relatively inexpensively from existing combat expertise within the Air Force. General Schwartz asserts that the "right kind of training and language skills" would allow us to use general-purpose forces in a versatile manner to prosecute irregular missions, including BPC.[31] However, the traditional Air Force outlook will be difficult to overcome because "without the emergence of bureaucratic acceptance by senior *military* leaders, including adequate funding for new enterprises and viable career paths to attract bright officers, it is difficult, if not impossible, for new ways of fighting to take root within existing military institutions" (emphasis in original).[32] Granted, the chief of staff is interested in changing the paradigm, but he is starting small—with a forecast investment of $694 million in Air Force IW capabilities over the next seven years.[33] The bulk of this money will go toward procuring light aircraft, thus giving rise to the question of how the service can build an IW force with such a small sum of money.

The answer lies in using the proven method of the 6th SOS but on a larger scale. As noted before, IW aircraft are relatively inexpensive, compared to existing platforms. With appropriate training, experienced aircrew personnel can quickly learn to fly much less complex aircraft and operate in a variety of environments. The Air Force's end strength will not likely increase to accommodate this critical mission, but we must make hard choices, just as we did when units of remotely piloted aircraft first demanded personnel. The primary group, consisting of people with maintenance, civil engineering, security forces, and advanced pilot skills, would receive COIN training as well as culture and language skills. But first, the Air Force must develop leaders who have a clear concept of airpower in a COIN role.

Air-minded leadership is critical to closing the gap between the Air Force's desire to build partner capacity and its nascent capability to do so. Selected leaders must possess a solid understanding of the challenges presented by building an irregular force in the United States and in partner nations. Personnel selected for this duty should include top officers and noncommissioned officers schooled not only in COIN but also in the tenets of airpower (centralized control and decentralized execution, flexibility and versatility, production of synergistic effects, a unique form of persistence, concentration of purpose, prioritization, and balance).[34] Although this sounds rather basic to US Airmen, the Air Force's air advisers have observed that the Afghan National Army Air Corps does not adhere to these tenets.[35] Currently, that tiny air arm persistently violates the tenet of central control by dispersing its forces to several regional ground commanders. Such a practice offers but one example of the lack of priority placed on the fundamental ideas essential to creating an air force. It is shocking to realize how the Air Force has allowed this egregious violation of an important airpower truth to marginalize the Afghan National Army Air Corps. Clearly, it must take steps to reverse this disturbing trend.

Specifically, establishment of an IW air force capable of ensuring the security of the state demands a comprehensive strategy.[36] The Air Force has devoted vast amounts of brainpower to developing its own such strategy to establish a superior, independent conventional force, yet it seems unwilling

to do the same for partner air forces. In military terms, strategy involves the use of resources to achieve a political goal, but the goal of establishing a credible air force for a partner nation continues to elude the US Air Force in IW endeavors despite its attempts to supply military resources. Perhaps the solution lies in significant investment in people armed with historical knowledge of airpower and COIN lessons, combined with the tenets of airpower. Some important characteristics of airpower in small wars, virtually absent from the current approach to constructing an IW/BPC force, include aircraft for performing such mundane roles as airlift, ISR, communications, agricultural support, pest control, and support to the democratic process.[37]

Currently, the Air Force's IW efforts tend to have a "warheads on foreheads" mind-set, emphasizing the high-technology aspects of remotely piloted aircraft gathering intelligence and conducting surgical, kinetic strikes. Even though these missions are certainly consistent with the service's extant technology and outlook, they have little relevance to ensuring that partner nations can perform these missions after the Air Force has departed. Based on historical precedent, no Air Force doctrine addressed the employment of airpower in IW or FID prior to 1 August 2007. The service tends to neglect situations in which it serves in a supporting rather than a primary role.[38] Because it is human nature to gravitate toward what we know or find comfortable, the Air Force favors offensive missions rather than support or even training roles.

In situations such as those we encountered in Iraq and Afghanistan, once we achieve air superiority (which occurs almost immediately), the Air Force's mind-set must shift. We need to realize that continued US offensive air operations may hinder the overall effort.[39] In the irregular fight, our forces must use air strikes precisely and judiciously, or they may do more harm than good. We must consider not only the frequency and accuracy of air operations but also the originator of those attacks.[40] The political effect of using the indigenous air force's aircraft to execute missions in combination with US forces could act as a powerful tool for winning the support of the people.[41] A critical aspect of COIN involves the host nation's government gaining and retaining legitimacy by giving the appearance of being in charge.[42] A credible air force goes a long way toward establishing this legitimacy. If a capable indigenous air force does not exist, then the US Air Force should assume responsibility for leading the effort to establish one. Unfortunately, the service's report card for Operations Iraqi Freedom and Enduring Freedom shows that we have missed this point.[43] Until 2008 the Air Force Airpower Summary listed US and coalition sorties but said nothing about operations and capabilities of the Iraqi Air Force.[44] Besides being horribly cost inefficient and retarding indigenous air forces, the Air Force practice of keeping a fleet of its frontline aircraft in the fight to occasionally employ a weapon in permissive airspace, akin to "hunting gnats with an elephant gun," reinforces the impression that coalition forces are imperialist.[45] The air forces of partner nations should carry out this irregular application of airpower, with assistance from the US Air Force.

Since most partner nations cannot afford specialized satellite-controlled ISR or expensive fighters and bombers, it seems logical that they acquire affordable, durable, and rugged multirole aircraft. In general, airpower's most important role in IW is support to other forces; thus, relevant airframes should deliver troops (via airdrop or airland techniques) and then have the persistence and versatility to provide ISR, command and control, and kinetic strike. These aircraft must be easy to maintain and fly, as well as inexpensive to operate. They must also have a STOL capability to operate in areas that usually permit only rotary-wing aircraft. Although austere countries like Afghanistan lend themselves to the use of helicopters for ingressing and egressing such rough terrain, a developing partner

nation will find that their higher cost, lower reliability, and slower speed often outweigh their utility.[46] A fixed-wing STOL aircraft can access most of the same landing zones as a helicopter and boasts greater reliability, durability, and versatility. In order to mentor air forces with such aircraft, the US Air Force's IW force should operate a fleet of the same types of platforms, and its aircrews must master the tactics, techniques, and procedures relevant to these aircraft. In this regard, the founders of the 6th SOS favor the Pilatus PC-6 Turbo Porter and the Basler BT-67.

Pilatus PC-6 Turbo Porter

A Swiss corporation founded in 1939, Pilatus Aircraft Limited describes itself as the world market leader in the manufacture and sale of single-engine turboprop aircraft.[47] The Air Force already maintains a relationship with Pilatus as a consequence of AFSOC's acquiring its PC-12 aircraft, converted for military use. Renowned for its unique STOL capability, reliability, versatility, and reputation as a rugged utility aircraft, the Porter is a light-lift, high-wing, single-engine-turbo-propeller, fixed-landing-gear, tail-dragger aircraft that can operate in all weather conditions and in all environments.[48] The fact that it can land in 417 feet (1,033 feet over a 50-foot obstacle) on a variety of surfaces, including sand, dirt, snow, and water, allows access to areas normally served only by helicopters.[49] Despite its relatively small 52-foot wingspan, the aircraft can carry a maximum payload of 2,646 pounds at an operating altitude of up to 25,000 feet and at a maximum rate of climb

Pilatus PC-6 Turbo Porter in Indonesia. (Photo courtesy of Pilatus Aircraft Limited.)

of 1,010 feet per minute.[50] Underwing tanks increase the Porter's endurance of over four hours to seven and a half.

Even more impressive is the versatility of the cargo compartment, equipped with large sliding doors on both sides and a removable floor hatch. The doors facilitate paradrops or easy cargo and passenger loading, and the floor hatch can be modified to accommodate an ISR sensor. The cabin layout supports 11 personnel in seats, or more on the floor for paradrops. Crews can rapidly refit the aircraft for other types of missions, including search and rescue, medical evacuation, or equipment ferrying. Furthermore, simply replacing the floor hatch with a trainable gun and hanging standoff weapons under the wings (or both) convert it into a gunship. The Pilatus has almost limitless potential in an IW role.

The legendary durability of the Porter offers perhaps the greatest benefit to the Air Force and partner nations. Its proven, reliable engine—the Pratt and Whitney PT6A—powers many other turbo-propeller aircraft, including the Basler BT-67. Designed for operation in adverse conditions by only one pilot, the rugged Porter can usually avoid "getting stuck" in remote areas. Requiring minimal logistical support, the aircraft is easy to maintain, thanks to its relatively simple modular design. This type of off-the-shelf aircraft, with some minor modifications, would cost far less than multiple specialized military models or helicopters. Thus, the Porter ideally meets the specifications of an IW aircraft.

Basler BT-67

An American company formed in 1957 and based in Oshkosh, Wisconsin, Basler Turbo Conversions produces the BT-67, a medium-lift, low-wing, twin-engine-turbo-propeller, retractable-landing-gear, tail-dragger aircraft designed to operate in the same environments as the Porter (except for water).[51] Much like the Porter, the Basler BT-67 offers a proven aircraft design based

Basler BT-67 in Afghanistan. (Photo courtesy of Basler Turbo Conversions, LLC.)

on that of a reengineered Douglas DC-3.[52] Basler remanufactures the DC-3 airframe, improves its engines and avionics package, and tailors the cargo compartment to meet customer requirements. The aircraft possesses remarkable STOL characteristics and a cargo capacity of 13,000 pounds. The landing distance for the BT-67 is 1,230 feet (1,980 over a 50-foot obstacle) at maximum gross weight—quite impressive for its size.[53] The maximum gross-weight climb rate at sea level of 1,075 feet per minute is very similar to the Porter's.[54] The more than five-hour (7.3 hours loitering) endurance en route increases to 10.5 (14.75 hours loitering) with extended-range tanks.

The versatile cargo compartment features an optional oversize cargo door and multiple hatch openings for ISR. The aircraft can hold up to 40 personnel with seats, or more on the floor for paradrops. The BT-67 can also accommodate search and rescue, medical evacuation, and equipment ferrying. Perhaps most notably, the BT-67 can also function as a gunship. The modified DC-3 airframe, known in a previous variant as the AC-47 gunship (retired from the Air Force inventory and no longer in production), was the forerunner of the AC-130 now used by the Air Force. However, Basler will reproduce this capability in addition to other variants. The BT-67 can carry standoff weapons and an ISR package,

yet it can quickly revert to airlift or some other role.

This aircraft's version of the Pratt and Whitney PT6A engine simplifies logistics considerations for maintainers of both the Porter and BT-67 since the planes share many engine parts. The durability of the DC-3 and AC-47 is well known, and Basler boasts that the BT-67 improves the company's already impressive record. This rugged multirole aircraft requires only minimal support but supplies unparalleled flexibility and versatility at an affordable price. Together with the Pilatus Porter, the BT-67 could serve as the inexpensive core of a family of IW aircraft for both the Air Force and partner nations.

Putting It All Together

These two aircraft meet the needs of both the US Air Force and of partner nations' developing air forces with regard to fielding a family of platforms for IW and FID. Existing conventional aircraft not designed for the rigors of IW will not close the gap between the Air Force's doctrine and its capability for this type of warfare. Arguably, the rugged STOL attributes of the aircraft described above eliminate the need for expensive and difficult-to-maintain rotary-wing aircraft in developing nations. Additionally, those countries would not need smaller and faster propeller-driven attack aircraft because the PC-6 and BT-67 can provide the same kinetic capability. An IW family of aircraft featuring these two types would allow the United States to posture itself strategically to help partner nations anywhere in the world.

As the US Air Force comes to terms with its commitment to developing an IW force capable of BPC, it needs to look at the problem from a perspective that differs from its traditionally conventional offensive, strategic, and independent mind-set. Refusing to pursue airpower ideas outside its decades-old paradigm failed to serve the Air Force well in earlier IW conflicts. The service must not overlook this opportunity to finally balance regular and irregular airpower by building an IW force capable of BPC in developing nations with a proper model designed to perform effectively. Sound Air Force IW doctrine now exists, but the service's leadership must adequately resource an IW organization capable of executing the mission. The service possesses a wealth of combat-tested personnel who can master the necessary skills. Finally, the Air Force must resist the inclination to solve the IW problem by pursuing a purely technological and kinetic solution that developing partner nations cannot sustain. It should set a goal of creating a standing IW force equipped and trained to provide credible and appropriate support to partner air forces on a significant scale, consistent with US policy. The Air Force can remedy the situation with a more robust IW force, but we need a long-term commitment from leadership to ensure its viability. ✪

Notes

1. Dr. Wray Johnson (one of the founders of the 6th SOS), multiple interviews by the author, September 2009–March 2010.

2. Air Force doctrine defines irregular warfare as "a violent struggle among state and non-state actors for legitimacy and influence over the relevant populations. IW favors indirect approaches, though it may employ the full range of military and other capabilities to seek asymmetric approaches in order to erode an adversary's power, influence, and will." Air Force Doctrine Document (AFDD) 2-3, *Irregular Warfare*, 1 August 2007, viii, http://www.e-publishing.af.mil/shared/media/epubs/AFDD2-3.pdf.

3. Lt Col Wray R. Johnson, "Whither Aviation Foreign Internal Defense?," *Airpower Journal* 11, no. 1 (Spring 1997): 66, 67, 83, accessed 19 July 2010,

http://www.airpower.maxwell.af.mil/airchronicles/apj/apj97/spr97/johnson.pdf.

4. General Schwartz is the first Air Force chief of staff without a fighter- or bomber-pilot background and the first pilot with special operations credentials to occupy this position. Originally a C-130 Hercules pilot, he later flew the special operations MC-130E Combat Talon I. He has commanded special operations forces at the group, wing, and major command levels. He has also commanded non-special-operations and joint organizations, serving as director of the Joint Staff and commander of United States Transportation Command. His breadth of experience in the special operations and joint arenas makes him a unique paradigm-changing chief of staff. See "General Norton A. Schwartz," accessed 19 July 2010, http://www.af.mil/information/bios/bio.asp?bioID=7077. See also John A. Tirpak, "The Irregular Air Battle," *Air Force Magazine* 92, no. 8 (August 2009): 22, http://www.airforce-magazine.com/MagazineArchive/Documents/2009/August%202009/0809battle.pdf.

5. Greg Grant, "Schwartz Shoots Down COIN Plane," *DoD Buzz: Online Defense and Acquisition Journal*, 6 May 2010, accessed 6 May 2010, http://www.dodbuzz.com/2010/05/06/schwartz-shoots-down-light-fighter/?wh=wh.

6. James S. Corum and Wray R. Johnson, *Airpower in Small Wars: Fighting Insurgents and Terrorists* (Lawrence, KS: University Press of Kansas, 2003), 11.

7. James J. Hudson, *Hostile Skies: A Combat History of the American Air Service in World War I* (Syracuse, NY: Syracuse University Press, 1968), 303.

8. James L. Stokesbury, *A Short History of Air Power* (New York: William Morrow and Company, 1986), 98.

9. Corum and Johnson, *Airpower in Small Wars*, 475.

10. Ibid., 237.

11. Johnson, "Whither Aviation Foreign Internal Defense?," 70.

12. Ibid.

13. Ibid., 72.

14. Corum and Johnson, *Airpower in Small Wars*, 273.

15. History, United States Special Operations Command, 6th ed., 2008, 5, accessed 16 December 2009, http://www.socom.mil/SOCOMHome/Documents/history6thedition.pdf.

16. Foreign internal defense involves "participation by civilian and military agencies of a government in any of the action programs taken by another government or other designated organization to free and protect its society from subversion, lawlessness, and insurgency." Joint Publication 1-02, *Department of Defense Dictionary of Military and Associated Terms*, 12 April 2001 (as amended through April 2010), 188, http://www.dtic.mil/doctrine/new_pubs/jp1_02.pdf. For a similar definition, see also AFDD 2-3.1, *Foreign Internal Defense*, 15 September 2007, 1, http://www.e-publishing.af.mil/shared/media/epubs/AFDD2-3.1.pdf.

17. James A. Bates, "The War on Terrorism: Countering Global Insurgency in the 21st Century," JSOU Report 05-8 (Hurlburt Field, FL: Joint Special Operations University, December 2005), 1, http://jsoupublic.socom.mil/publications/jsou/JSOU05-8batesWarOnTerrorism_final.pdf.

18. Johnson, interviews.

19. Department of Defense, *Quadrennial Defense Review Report* (Washington, DC: Department of Defense, February 2010), 30, http://www.defense.gov/qdr/images/QDR_as_of_12Feb10_1000.pdf.

20. Brig Gen Michael R. Boera, "The Combined Air Power Transition Force: Building Airpower for Afghanistan," *Air and Space Power Journal* 24, no. 1 (Spring 2010): 16–26, accessed 1 August 2010, http://www.airpower.au.af.mil/airchronicles/apj/apj10/spr10/aspj_en_2010_1.pdf; and Maj Gen Robert R. Allardice and Maj Kyle Head, "The Coalition Air Force Transition Team: Rebuilding Iraq's Air Force," *Air and Space Power Journal* 21, no. 4 (Winter 2007): 5–14, accessed 1 August 2010, http://www.airpower.au.af.mil/airchronicles/apj/apj07/win07/win07.pdf.

21. Tirpak, "Irregular Air Battle," 23.

22. Corum and Johnson, *Airpower in Small Wars*, 195.

23. Carl H. Builder, *The Masks of War: American Military Styles in Strategy and Analysis* (Baltimore, MD: Johns Hopkins University Press, 1989), 19.

24. AFDD 1, *Air Force Basic Doctrine*, 17 November 2003, 21, http://www.e-publishing.af.mil/shared/media/epubs/AFDD1.pdf.

25. Daniel L. Magruder, "The US Air Force and Irregular Warfare: Success as a Hurdle," *Small Wars Journal*, 2009, 7, accessed 29 November 2009, http://smallwarsjournal.com/blog/journal/docs-temp/272-magruder.pdf.

26. Ibid.

27. AFDD 2-3, *Irregular Warfare*, [ii].

28. Michael B. Donley and Gen Norton Schwartz, *The 21st Century Air Force: Irregular Warfare White Paper* (Washington, DC: Headquarters US Air Force, January 2009), 4.

29. Magruder, "US Air Force and Irregular Warfare," 6.

30. Lt Col Robert Spalding, "America's Two Air Forces," *Air and Space Power Journal* 23, no. 2 (Summer 2009): 51–56, accessed 29 November 2009,

http://www.airpower.au.af.mil/airchronicles/apj/apj09/sum09/spalding.html.

31. Tirpak, "Irregular Air Battle," 23.

32. John A. Nagl, *Counterinsurgency Lessons from Malaya and Vietnam: Learning to Eat Soup with a Knife* (Westport, CT: Praeger Publishers, 2002), 4.

33. Tirpak, "Irregular Air Battle," 24.

34. AFDD 1, *Air Force Basic Doctrine*, 27.

35. Col Todd R. Lancaster, interview by the author, September 2009.

36. Corum and Johnson, *Airpower in Small Wars*, 425.

37. Ibid., 425–37.

38. Maj Kenneth Beebe, "The Air Force's Missing Doctrine: How the US Air Force Ignores Counterinsurgency," *Air and Space Power Journal* 20, no. 1 (Spring 2006): 28, accessed 19 July 2010, http://www.airpower.au.af.mil/airchronicles/apj/apj06/spr06/spr06.pdf.

39. Maj William Brian Downs, "Unconventional Airpower," *Air and Space Power Journal* 19, no. 1 (Spring 2005): 20–25, accessed 19 July 2010, http://www.airpower.au.af.mil/airchronicles/apj/apj05/spr05/spr05.pdf.

40. Ibid.

41. Ibid.

42. Col 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): 68–79, accessed 19 July 2010, http://www.airpower.au.af.mil/airchronicles/apj/apj09/win09/win09.pdf.

43. Ibid.

44. Ibid., 75.

45. Ibid., 77.

46. Johnson, interviews.

47. "PC-6 Turbo Porter: Anywhere, Anytime in Any Environment" (Stans, Switzerland: Pilatus Aircraft, n.d.), accessed 10 August 2010, http://www.pilatus-aircraft.com/00-def/main/scripts/ckfinder/userfiles/files/Downloads/Brochures/Pilatus%20Aircraft%20Ltd%20-%20PC-6.pdf.

48. Ibid.

49. Ibid.

50. Ibid.

51. "BT-67, an Overview," Basler Turbo Conversions, accessed 13 December 2009, http://www.baslerturbo.com/bt_67_overview.html.

52. Ibid.

53. Mr. Tom Weigt, Basler Turbo Conversions executive, interview by the author, 3 August 2010.

54. Ibid.

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