Developing Air Force Field Grade Officers for Joint Leadership

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With the centrality of airpower in contingency operations, it is puzzling that more Airmen have not served in joint leadership positions throughout task forces and combatant commands. From Syria and Iraq to Afghanistan, partnered and enabled operations are catchphrases used to articulate current military action. The phrases are intended to capture the partnered, enabled operations the coalition is conducting against our enemies. Other than "train, advise, assist, and accompany" operations, American airpower has been the dominant form of direct influence in current military operations. For both, force finally counts. However, what our partners do on the battlefield is up to them to decide—a task for which American military ways and means are not ideally suited to directly influence. Critical warfighting functions that enable our partners' ground scheme of maneuver in current campaigns grind to a halt without airpower. These critical war-fighting

functions are: intelligence, surveillance, and reconnaissance (ISR) and target development, mobility of troops and material around the battlefield, combat search and rescue, medical evacuation, precision strike, and ensuring air superiority. Because Airmen already perform extraordinary heavy lifting in current conflicts, it is reasonable Air Force officers should gain experience necessary for joint, strategic-level leadership. The historical record shows otherwise.

The epitome of joint, strategic leadership is embodied in the command of a joint task force or a geographic combatant command. Even if the Goldwater-Nichols Reorganization Act was designed 30 years ago to foster joint-mindedness, many issues remain unresolved. The chairman of the Joint Chiefs of Staff (CJCS) commissioned a "Joint Forces Next" initiative which reviewed the training, education, and experience required to lead in the future. Gen David L. Goldfein, Air Force chief of staff, made joint leadership development a top priority and stated his intent is "that we can step in, and not only support, but lead any of those operations."[1] Other senior officers think the Air Force has a problem since "our best and brightest are able to offer only tired and uncreative strategies is not as important as what we need to do now."[2] While tides may have changed recently at the senior levels, in decades past, the Air Force has a troubled record developing joint force leaders.[3] Until 2013, the service that prides itself as "strategic" has only fielded seven combatant commanders since 1947.[4] Therefore, it could be productive to ask how the Air Force prepares field grade officers (FGO) for future joint leadership roles?

This article argues that the Air Force does not sufficiently develop FGOs for joint leadership roles.[5] It begins to explain why the Air Force needs—but has not developed—many FGOs who become leaders within the joint community. At field grade level, the net must be broadly cast because we cannot predict who will develop into joint senior leaders. This article does not cast blame outside the Air Force, but it does highlight internal challenges. It may be underwhelming to some, but it does not advocate for Air Force leadership of current operations. Instead, it is inward looking, meant to spur productive discussion within the Air Force about our institution's role in developing FGOs as joint leaders for the nation.

Does the Nation Need Joint, Strategic Air Force Leaders?

While some may argue that the nation is better served by drawing on the talent in the Air Force, many do not agree with this proposition. A reason why some may not envision themselves as leaders of the joint force is that the vast majority of conflict scenarios do not require Air Force leaders. In these scenarios, airpower does not contribute the preponderance of forces or effects but is employed as an enabling component to land power. Taken to the extreme, some advocate we abolish the Air Force entirely.[6] Far too often, the bar for a successful air campaign is set so high it cannot be met. Serious airpower advocates do not argue that an independent, strategic bombing campaign can bring about swift victory. By the same standard, ground power acting alone has had a grim record. No recent ground campaign has singlehandedly secured victory. Alternatively, even if the Air Force does not provide the preponderance of forces to a campaign, the air component may be providing the majority of the effects for the joint force commander. In this light, air, land, and sea

power are most effective at bringing about military and political goals if they work in concert.

National security is improved if all services are given a voice to add their perspective and, if qualified, opportunities to lead joint forces. This view recognizes the service as not just a force provider, but can put its best leaders forward to solve joint problems. Former Chief of Staff of the Air Force Gen Norton A. Schwartz stated "that [if] we don't fully use airmen in all joint war fighter roles, then it will catch up with us and our overall national security—sooner rather than later."[7] This has borne out in combat operations in the past. For example, before Operation Anaconda, the air component was largely excluded from planning until the final stages that resulted in the incomplete integration of airpower. Lt Gen David A. Deptula, a key air planner at the time, recalled that only three lines in the 145-page operations order addressed air operations.[8] Additionally, former Air Force Secretary Michael W. Wynne recognized that "When you don't have that Air Force general in command, you lose the air perspective over time."[9] JFCs facing operational problems can often influence the long-term institutional decision making of service chiefs. For example, wartime requirements articulated by combatant commanders of the post-9/11 world drove both the Army and Air Force to adapt in serious ways.[10]

This article advocates that only under certain circumstances should Air Force leaders be considered for joint leadership positions. This is congruent with the "most qualified" model for selection of joint leaders.[11] When faced with a crisis, contingency, or selecting combatant commanders, national leadership often looks to the most qualified candidates. What justifies the most qualified candidate depends on the context of the problem and background of the candidates. National leaders consider the types of problems facing potential commanders and select individuals accordingly. If this is the case, then the Air Force cannot complain if it does not privilege the development of individuals with requisite joint skills and experience. To be sure, it would be worse to place unqualified individuals in positions of leadership just for the sake of inclusion.

Regardless of one's position on whether the Air Force should produce joint leaders, it's understanding joint matters that makes better USAF officers. Whether a specialist or generalist in the Air Force, we must understand how our efforts contribute to a JFC's overall objective. A JFC is responsible for crafting a multidomain approach to achieve effects that facilitate a political end state. In terms of airpower effects, understanding the ground or naval scheme of maneuver will help Airmen optimize the tactical and operational design to meet the JFC's intent. Second, the structure and processes that guide the allocation and command and control of airpower need to meet the commander's intent. For example, in current fights more emphasis is placed on ISR and close air support assets. Interestingly, understanding how those ISR, strike, and mobility assets enable the political will and the ground scheme maneuver of our partners is a huge force multiplier. Precisely because they are predominantly terrestrial operations, a premium is set on the integration of airpower with coalition partner plans in Iraq and Afghanistan. To this point, CJCS Gen Joe Dunford, USMC, said: "The pace of our bombing is driven by the pace of operations of our partners. . . ."[12] This logic demands USAF officers have a basic grasp of joint warfare and how their actions tie into the ground scheme maneuver of partners.

Challenges in Developing Joint Leaders

Some may argue the Air Force is shut out of joint leadership opportunities. According to Gen Colin Powell, during his tenure as CJCS, it was not due to ill will.[13] A less parochial and more accurate argument is that national leaders select senior joint leaders based on the "most qualified" model. On this count, the Air Force has shied away from producing joint leaders. As recent as 2010, Wynne admitted the USAF would save "our 'A' people for the Air Force staff and the 'B' people for the joint staff."[14] This is corroborated by an earlier assertion by Col Phillip Meilinger, USAF, that: "The epitome for airmen was to be Chief or ACC (Air Combat Command) commander. . ." all else was ". . . table crumbs."[15] Besides a proclivity to centralize talent within service roles, the Air Force's current culture works at cross-purposes to building joint leaders. There are at least three reasons why the Air Force struggles to develop FGOs as joint leaders: (1) a service culture that prides itself on the particular and technical, (2) structural constraints, and (3) a bias for action over reflection.[16]

Tactical and Technical Focus

The Air Force privileges technical skills applicable at the tactical level. In terms of service culture, if one is asked "What do you do?," most will respond with a specialty such as pilot or intelligence officer. Tactical performance determines who gets promoted, but this may not translate into operational or strategic aptitude. For example, it is much easier to learn standard operating procedures in a known environment than it is to integrate those actions into a larger operation designed to elicit military effect for political purpose. This is because training is focused toward certainty. Realistic training puts individuals in simulated experiences to build pattern recognition and stress inoculation. However, the realm of operational planning deals with a multitude of unknowns that places the onus of being prepared for a wide range of scenarios. At higher levels of command, specific training will help marginally, but education and preparation for uncertainty will help exponentially.

A focus on the technical has its roots in many of the Air Force's institutions. The highly technical nature of service dictates an USAFA curriculum that emphasizes technical skills and engineering over social science or humanities. This is mirrored by USAF Weapons School instruction. By and large the curriculum is focused on training tactical experts, albeit with a culminating exercise, that integrates everyone. It is not until the final phase that the operational level of war is addressed, but they are single missions of increasingly difficulty rather than one scenario against an evolving enemy.[17] Fundamentally, the focus on technology and sound tactics is preeminent. At the Air Command and Staff College, "the service teaches 'people, processes, and products' that make up the Air Operations Center (AOC)."[18] To be sure, knowing the narrowly focused functions of air, space, and cyber within the AOC is important. However, there are disparities between a process-centric conception of air campaigning and activities that strive to achieve joint effects across all five domains.[19] The latter requires synchronizing effort in a campaign at the operational level of war.

A related issue is that technology employed tactically is a substitute for sound operational approaches. Former Air Force Chief of Staff Gen T. Michael Moseley, acknowledged "we risk being associated with—if not defined by—the material means of strategy, rather than its ends and ways."[20] To this point, airpower theorist Carl Builder admits that keeping "faith in ideas rather than things is difficult when institutions and resources are focused on things."[21] High-end technology is no substitute for strategy because "technical proficiency cannot substitute for an ability to analyze issues critically and apply every asset available to achieve a specific end in differing political and military contexts."[22] Strategic thinker Colin Gray himself admits, "It is paradoxical that air forces willing and able to expend billions of dollars on technical and tactical education typically devote a trivial amount to understanding what they do or might do strategically and why they are asked to do so by their political owners."[23] Operationally, this is borne out through the focus on optimizing complex processes.[24] Builder argues the Gulf War "was mostly a demonstration of operational and tactical virtuosity," and that because airpower is being applied to tactical ends "the strategic flame has dimmed."[25]

Structural Constraints

The second barrier to developing joint FGOs is structural constraints which limit USAF officers from gaining broad leadership experience. For example, when a typical Air Force lieutenant colonel is compared to an Army or Marines Corps peer, the latter has already commanded at least twice at the platoon and company levels.[26] However, it is remarkable to note that the average "fast-track" Air Force colonel (graduated wing commander) may, on average, command three times in their career—squadron, group, and wing levels.[27] At the same time, the equivalent Army colonel may have commanded at least four times in their career—platoon, company, battalion, brigade/regiment levels. Further restricting broadening opportunities, the Air Force has two colonel commands and requires less time to make general officer.[28] These factors combine to limit the breadth and scope of leadership experiences of potential joint leaders.

Although a generalization—both in garrison and deployed—USAF commanders do not exercise commensurate responsibility as joint force partners of the same rank. Anecdotally, some fighter squadron commanders in the F-22 and F-15C communities have between 20–35 people assigned—a vast majority of whom are officers. An average Air Force squadron numbers a couple hundred Airmen whereas an Army battalion can range from 5–800 soldiers. The size disparity drives a qualitative difference in scope between the two. Second, because of the size of a battalion, it requires a staff. This provides key developmental lessons to young captains and majors who work on those staffs to coordinate functions for the organization. Beyond disparities of scale, once an officer reaches the pinnacle of tactical leadership—wing command—there are more gaps.

It is not until the group or wing level that Air Force commanders actually command (organically) their own logistics support, communications, and sustainment on a truly large scale. Joint basing has made this more difficult for the Air Force to

develop experience in directing large organizations. For example, the fighter wing commanders at Elmendorf AFB, Alaska and Joint Base Langley–Eustis, Virginia only own the operations and maintenance functions while the remaining support functions report to a separate air base wing commander.[29] It should be no surprise then, that different command chains would set different priorities when addressing challenges facing service leaders at joint bases. Second, at the wing- and base-level, commanders start to interact with the surrounding community. This is too late in one's career to be expected to develop skills to interact with high-ranking civilians or partner nation leaders. Finally, because there are a limited number of officers on the operations/command track in the Air Force, it limits the pool of potential joint operational leaders.[30] All of these factors contribute to a shortage of officers who even have a chance of becoming a "most qualified" candidate for joint leadership opportunities.

Analytical Skills Required for Strategic Thinking

The final theme that cuts against the development of FGOs is a reliance on personal experience and intuition rather than reflection to guide decision making.[31] A bias for action over analytical deliberation is endemic to the military profession that largely shuns "independent thought and critical inquiry."[32] Lt Gen H. R. McMaster, USA, national security advisor, wrote that in terms of avoiding mistakes of the past "our record of learning from previous experience is poor."[33] Exercising sound judgement is the essence of decision making. Armed with strong critical-thinking skills officers can create fresh perspectives to address current challenges.[34] Gen John R. Galvin concluded the key elements to a developing strategic intellect are: "advanced schooling, operational experience, and lifelong development."[35] Writing is thinking because "the elements of good writing. . . bear a demonstrable relation to the powers of the mind."[36] Recognizing this, the Army has produced numerous scholar-warriors.[37] Many challenged the status quo in public forums to advance the national interest, and some knowingly and courageously imperiled their careers advocating policies to advance the national interest.

A symptom of a bias for action over reflection is the lack of Air Force officers debating strategic issues in a public forum. Serving as chief of staff, General Moseley said, "I see a need to increase the quality and quantity of Airmen's voices in the strategic debate."[38] Similarly, a group of senior strategists lamented the fact the Air Force "is arguably the most strategic service but lacks individuals making the intellectual arguments to support it."[39] Current trends are in contrast to the heyday of Air Force strategic thinkers such as Generals Billy Mitchell, Henry H. Arnold, Curtis E. LeMay, or much less known Glenn Kent and Nathan F. Twining. In the past two decades, the most prolific Air Force authors have been a lawyer, Maj Gen Charles Dunlap, and a more well-known air strategist, General Deptula. Before then, Colonels John Boyd and John Warden were thought leaders within the Air Force but outsiders based on temperament. Another symptom is a systemic devaluation of serving in academic instructor roles.[40] Again, this runs counter to the trend that 31 of 35 of the men who rose to become corps commanders in World War II taught at service schools at some point in their career.[41]

There are two main ways military officers improve their judgment skills: self-study or formal education. Historically, intellectual development was done on personal time.[42] A lifelong passion for self-study is the most common theme among all great strategists because ". . . development is progressive, with each level building on preceding levels."[43] While General Patton is recognized as the best fighting general of World War II, he only spent 13 months on the battlefield in combat with the bulk of his career spent "reading, for reflection, for prethinking the next phase of operations, and for writing a vast compendium of letters, diaries, speeches, and studies."[44] Modern air warriors think along the same lines. Maj Gen R. Mike Worden said: "Air strategists make time to study war—in the classroom, seminar, or conference—but mostly in a professional life devoted to self-study and reflection."[45]

The second way to develop an analytical aptitude is through dissimilar education such as civilian schooling or through fellowships in think-tanks and the interagency. The goal of dissimilar developmental experiences is to get officers comfortable with ambiguous situations. Ideally, officers build intellectual skills to make the uncertain more certain. A focus on inductive skills sharpens one's ability to discern what is conceptually at stake within a debate, build consensus, persuade with logic/evidence, and achieve outcomes that matter on the battlefield. Successful strategists can synthesize large amounts of data and understand the means and ends—which are skills directly linked with problem-solving.[46] Indeed, many claim dissimilar experiences exponentially increased their intellectual and professional growth.[47]

Success Stories

Despite barriers to Airmen becoming joint leaders, there are examples of Airmen who have become joint leaders. There have been at least seven Air Force combatant commanders since 1947. Confirming the assertions of the most-qualified model, USAF leaders have emerged when they have careers steeped in the required expertise. As of 2008, the Air Force has served in 21 of 71 opportunities to command JTFs.[48] From 1990–2009, just 17 percent of all JTF leaders were Air Force. However, these JTFs were decidedly noncombat-related.[49] As the RAND Corporation study found, "The 5 'combat' JTFs enforced no-fly zones (NFZs) in northern and southern Iraq and Bosnia and conducted an air campaign from Turkey during Operation Desert Storm."[50] As the record shows, the Air Force fares much better in functional commands such as US Transportation, Strategic, and Cyber Commands.[51] Even as the Air Force has not excelled in war-fighting roles, there are anomalies that bear special consideration. Lt Gen Brent Scowcroft (two-time NSA) and Gen Paul Selva (current vice CJCS) both received advanced social science education and spent more than a decade in the joint, interagency environment.[52]

A Modest Proposal for the Air Force

As depicted in the focus on core skills in the figure, prospective joint leaders should have consecutive building blocks throughout a career that develop a capacity to plan, prepare, and execute joint, combined arms across all war-fighting domains

and functions. In a career, officers are faced with a choice between remaining a functional expert within an Air Force specialty and broadening to become equally skilled at integrating joint combat power. If the USAF desires to develop strategic leaders, it must start early because the most precious resource in a career is time. The problem for the Air Force is that it must plant the "seed-corn" at the FGO ranks to build joint leader candidates. Three modest proposals are offered below to address the main challenges inhibiting the institution's development of leaders of the joint force.

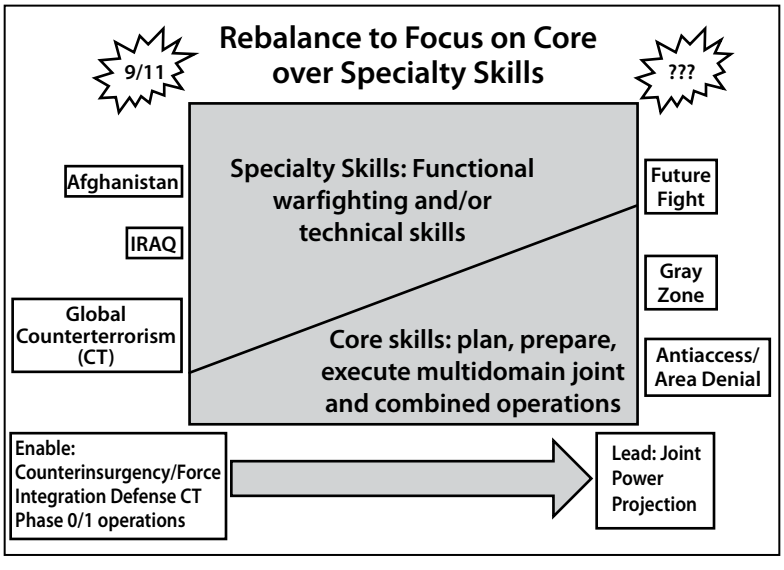

Figure. Paradigm shift from enabling to leading joint operations

First, the Air Force should slightly alter how it utilizes FGOs. Tactical officers should rightfully be focused on executing commensurate tasks. However, as officers are promoted to field ranks they should begin to integrate multidomain aspects into campaigning operations.[53] This distinction is on an officer's ability to shift away from specialty and functional war-fighting skills employed in particular situations toward core tasks used across the spectrum of conflict. Specialty and functional skills are specified by Air Force Special Code, which typically dictates a certain career path within a functional specialty. These types of capabilities have been extremely important to enable operations since 9/11 in Iraq, Afghanistan, Libya, Phase 0/1 tasks and, more broadly, global counterterrorism efforts. However, these tactically focused efforts may not necessarily translate into improving operational or strategic performance that's required in uncertain environments of the future: deterring aggression and malign influence, antiaccess/area-denial, or gray zone operations. These challenges require expertise to plan, prepare, and execute a wide swath of multidomain operations with joint, combined, and/or interagency partners. This does not discount the requirement to have technical and functional experts. However, it does require acknowledging that building and maintaining experts to enable joint operations is not

enough. To maximize contributions to national security, the Air Force should endeavor to develop experts in planning, preparing and, most importantly, leading the execution of joint operations.

Second, to address structural limitations, the Air Force could take a radically different approach to officer career paths. By selecting a career track around the 10-year mark, it could gain efficiencies to carve out time for specific development in desired areas. A new construct could offer one of three career tracks: USAF specialists, generalists, and joint-focused officers. Air Force specialists would not be on the "command track," but instead would be technical specialists focused on wielding technology and remaining the most tactically proficient air force in the world.[54] Second, Air Force generalists are the officers who have less interest in joint matters, but prefer to lead USAF organizations. This is largely the status quo in the Air Force and representative of those of who advance "up the organization" but not out as many specialists opt to do so. They would still serve in the requisite joint qualified assignments to gain breadth, but they would primarily lead Air Force formations. Finally, the smallest cohort of officers may opt into the pool of candidates to serve in a series of joint assignments. These are officers who may not be the Air Force specialist or generalist but will represent the perspective of airpower on joint staffs nonetheless. Doing this may allow the Air Force to focus efforts on a smaller, more manageable cross-section of future leaders to develop.

Finally, and equally important to the types of commands and assignments, is the type of educational opportunities that aim to develop intellectual competencies required for joint, strategic leadership. To the Air Force's credit, the School of Advanced Air and Space Studies produces strategists rather than planners but to maintain its quality of instruction must limit throughput. More opportunities should be given to USAF officers to gain the diverse education required to tackle uncertainty. In addition to learning the standard planning processes taught in professional military education, more one-year assignments to top-notch civilian graduate programs to study strategy, history, or international relations should be available. Indeed, the focus on improving inductive reasoning is a good balance to the deductive reasoning employed in planning doctrine.[55] In today's system, a small number of officers are afforded fellowships at civilian organizations, foreign schools, or opportunities to pursue advanced civilian degrees.[56] These opportunities should be focused in intermediate developmental education so the USAF maximizes its return on the investment.

One the one hand, as the Air Force orients itself to develop officers steeped in joint matters, it is a paradox that one cannot get the job without experience. On the other hand, one cannot get the experience without a job that builds joint credibility. To overcome this dilemma, the Air Force must intently develop a small cross-section of high performing FGOs for joint roles.[57] Only when the service creates a crop of individuals steeped in joint experience can they begin to be considered for commensurate leadership opportunities. An Air Force commitment to better prepare officers is not self-serving to the institution because it improves the service's contribution to national security in terms of offering capable, qualified joint leaders. However, this requires the Air Force be given opportunities to succeed. One way to gain trust and credibility is to seek first to understand joint force requirements and take steps to prepare officers to that end. Perhaps by focusing a small cohort to

learn to become the best teammates, we will, one day in the future, find some of our best officers leading the joint force. ✪

Notes

1. "Goldfein's Gambit: Former Air Force Chiefs Weigh in on His Ambitious Plans," *Air Force Times*, 18 September 2016, https://www.airforcetimes.com/2016/09/18/goldfein-s-gambit-former-air-force-chiefs-weigh-in-on-his-ambitious-plans/.

2. Brig Gen Scott Bethel, Col Aaron Prupas, Col Tomislav Ruby, and Col Mike Smith, USAF, "Developing Air Force Strategists: Change Culture, Reverse Careerism," *Joint Force Quarterly* (*JFQ*) 58 (July 2010): 83, http://www.au.af.mil/au/awc/awcgate/jfq/bethel_af_strategists.pdf.

3. A number of current general officers have held significant joint leadership posts: Gen Lori Robinson, commander, US Northern Command (NORTHCOM); Lt Gen Charles Brown, deputy commander, US Central Command; Lt Gen Scott Howell, vice commander, US Special Operations Command (SOC); and former commander, Special Operations Joint Task Force–Afghanistan; and Lt Gen James Vechery, deputy commander, military operations US Africa Command (AFRICOM).

4. Gen Lauris Norstad, Supreme Allied Commander Europe (SACEUR), 1956–62; Gen Joe Ralston, SACEUR 2000–03; Gen Douglas M. Fraser, US Southern Command (SOCOM) 2009–12; and Gen Phillip Breedlove, (SACEUR) 2013–16. NORTHCOM has had three Airmen as commanders: Gen Ralph Eberhart 2002–04, Gen Victor Renuart 2007–09, and most recently General Robinson. Notably, Gen Charles Holland served as SOC commander during the busy post–9/11 era. Similarly, there have been a small number of Air Force deputy combatant commanders: Gen James Jamerson, General Brown, and Lt Gen Timothy Ray.

5. Unfortunately, there is no definition of "joint leadership." See Dan McCauley, "Rediscovering the Art of Strategic Thinking: Developing 21st Century Strategic Leaders," *JFQ* 81 (March 2016): 28–29, http://ndupress.ndu.edu/JFQ/Joint-Force-Quarterly-81/Article/702006/rediscovering-the-art-of-strategic-thinking-developing-21st-century-strategic-l/.

6. For this argument, see Robert Farley, *Grounded: The Case for Abolishing the United States Air Force*, (Lexington, KY: University of Kentucky Press, 2015).

7. Michael Hoffman, "Air Force Four-Stars Left Out of Top War Jobs," *Air Force Times*, (1 November 2010), 26.

8. Lt Gen Russell Handy, "Opening the Aperture. . . Ending Service Branding of US Unified Commands," (master's thesis, Air War College, 2003).

9. Hoffman, "Air Force Four-Stars Left Out," 26.

10. Rebecca Grant, "Why Airmen Don't Command," *Air Force Magazine*, March 2008, 48, http://www.airforcemag.com/MagazineArchive/Pages/2008/March%202008/0308command.aspx. Another example is the significant increase in drone combat air patrols.

11. Lt Col Howard Belote, USAF, "Once in a Blue Moon: Airmen in Theater Command," *CADRE Papers* 7, https://media.defense.gov/2017/Nov/21/2001847040/-1/-1/0/CP_0007_BELOTE_ONCE_IN_BLUE_MOON.PDF (Maxwell AFB, AL: Air University Press, 2000).

12. Andrew deGrandpre, "U.S. Troops Will Be Needed in Iraq after Mosul Falls, Pentagon Chief Says," *Military Times*, 10 January 2017, https://www.militarytimes.com/news/your-military/2017/01/11/u-s-troops-will-be-needed-in-iraq-after-mosul-falls-pentagon-chief-says/.

13. Handy, "Opening the Aperture," 2–4.

14. Hoffman, "Air Force Four-Stars Left Out," 26.

15. Grant, "Why Airmen Don't Command," 47.

16. For an overview and Air Force perspective, see Tom Ruby, "Flying High, Thinking Big," *The American Interest*, http://www.the-american-interest.com/2009/05/01/flying-high-thinking-big/. For Army perspectives see, Nate Finney, https://medium.com/the-bridge/anti-intellectualism-in-the-army-a802d98c3611#.n65y0y7q3, and Don Snider, "Whiskey over Books, Again? Anti-Intellectualism and the Future Effectiveness of Army 2025," *Strategic Studies Institute*, February 2016, http://publications.armywarcollege.edu/pubs/3333.pdf.

17. This is from the author's personal experience as a weapons and tactics officer. While Special Tactics did not have a "patch" program at the time, the author attended all academics phases in Class

2008–Bravo and facilitated multiple "mission employments" with combat controllers and pararescuemen in 2006 and 2007. Most recently, the author led a 108-Airmen element in the execution of ground special operations forces Vuls (flying windows) during the winter 2016 Weapons School integration.

18. Bethel et al., "Developing Air Force Strategists," 84.

19. Ibid., 84.

20. Gen T. Michael Moseley, "Airmen and the Art of Strategy," *Strategic Studies Quarterly* (*SSQ*) (Spring 2007): 15, http://www.airuniversity.af.mil/Portals/10/SSQ/documents/Volume-01_Issue-1/Moseley.pdf.

21. Carl H. Builder, "Keeping the Strategic Flame," *JFQ* (Winter 1996–97), 83, http://www.dtic.mil/doctrine/jfq/jfq-14.pdf.

22. Ruby, "Flying High, Thinking Big."

23. Colin Gray, *Airpower for Strategic Effect*, (Australia: Military Bookshop, 2012), 27.

24. This is borne out in the focus placed on the Combined Air Operations Center at the operational level of war.

25. Builder, "Keeping the Strategic Flame," 80.

26. Admittedly, this article focuses on the operational Air Force specialties which are most likely to lead to joint operations, plans and policy, and joint command roles. Also, it is not reasonable to equate leadership of a typical operational Air Force aviation flight (which could number just a handful of officers) to a platoon that can average 40 personnel.

27. Some may argue that the flight is another level of command, but for many rated individuals—which this article focuses on for their potential to become joint operations and plans leaders—they do not supervise a large number of people.

28. Bethel et al., "Developing Air Force Strategists," 86.

29. It is also worth noting that these wings are small when compared to their service counterparts. The 1st Fighter Wing has about 1,000 members.

30. According to the Air Force Personnel Center, there are 12,681 pilots and 3,285 navigators. These groups account for roughly 25 percent of the total officer strength of the Air Force. These Air Force Specialty Codes predominantly make up the officers the types of officers who advance up the operations/command track in joint assignments. See http://www.afpc.af.mil/Air-Force-Demographics. On the other hand, the Army has about 82,000 officers, 40 percent of who are in operations jobs. See FY 2014 data at: http://www.armyg1.army.mil/HR/demographics.asp. While this may contribute to a disproportionate Army representation in joint commands, it cannot fully account for why and how Army leaders historically outnumber other services in top joint posts.

31. Maj Gen Robert Scales, "Too Busy to Learn," *Proceedings*, US Naval Institute, February 2010, 32. For an Air Force perspective, see Col Tomislav Z. Ruby, "The Impact of Anti-Intellectualism in the US Air Force" (PhD diss., Air University, n.d.), bgcts.com/wp-content/uploads/2015/02/bgcts_usafantiintellectualism.doc (site discontinued).

32. Greg Foster, "Research, Writing, and the Mind of the Strategist," *JFQ* (Spring 1996), 112, https://wss.apan.org/s/JSOFUN/Shared%20Documents/WriteAndRead/Research_Writing_and_the_Mind_of_the_Strategist.pdf.

33. Lt Gen H. R. McMaster, "The Pipe Dream of Easy War," *New York Times*, 20 July 2013, http://www.nytimes.com/2013/07/21/opinion/sunday/the-pipe-dream-of-easy-war.html.

34. Bethel et al., "Developing Air Force Strategists," 88.

35. Gen John R. Galvin, "What's the Matter with Being a Strategist?" *Parameters* 19 (March 1989): 2–10, https://pdfs.semanticscholar.org/7986/16b51c46ad816a324900e05303ce0fc9e15f.pdf.

36. Foster, "Mind of the Strategist," 115.

37. For example, Generals John R. Galvin, William E. Odom, David H. Petraeus, H. R. McMaster, Daniel P. Bolger, Robert H. Scales and a cohort of nonflag officers in Andrew Krepinevich, Andrew Bacevich, John Nagl, and Paul Yingling.

38. Moseley, "Airmen and the Art of Strategy," 15.

39. Bethel et al., "Developing Air Force Strategists," 83.

40. Unless instructing at the USAF Weapons School, academic billets are not typically command track career choices.

41. Scales, "Too Busy to Learn," 32.

42. The list of war fighters in history who could also be categorized as intellectually curious or voracious readers is impressive: Generals Winfield Scott, Ulysses S. Grant, Fox Connor, Douglas MacArthur, George C. Marshall, Dwight D. Eisenhower, George S. Patton—and most recently, Secretary of Defense James Mattis.

43. George Forsythe, "The Preparation of Strategic Leaders," Fort Belvoir, Defense Technical Information Center, 1992, 44, http://www.dtic.mil/dtic/tr/fulltext/u2/a528179.pdf.

44. Roger Nye, "Whence Patton's Military Genius," *Parameters* 21 (Winter 1991–92): 60–73.

45. Maj Gen Mike Worden, "Developing Twenty-First-Century Airpower Strategists," *SSQ* (Spring 2008), 23, http://www.airuniversity.af.mil/Portals/10/SSQ/documents/Volume-02_Issue-1/worden.pdf.

46. Bethel et al., "Developing Air Force Strategists," 88.

47. Barak Salmoni, Jessica Hart, Renny McPherson, and Aidan Kirby Winn, "Growing Strategic Leaders for Future Conflict," *Parameters* (Spring 2010), 78, http://ssi.armywarcollege.edu/pubs/parameters/articles/2010spring/40-1-2010_salmonietal.pdf . The following officers benefitted from service-supported civilian education: Generals Peter W. Chiarelli, Martin Dempsey, John Galvin, and David H. Petraeus; Admirals Michael Mullen and James G. Stavridis; Lt Gen Dan Bolger and Lt Gen H. R. McMaster; and Maj Gen Robert H. Scales. General Petraeus proposed six benefits of civilian graduate school: it forces you to move out of an intellectual comfort zone, increases appreciation for diverse and divergent views, exposes yourself to a huge range of topics and knowledge, develops oral and written communication skills, improves critical thinking skills, and imbues intellectual humility. See General Petraeus, "Beyond the Cloister," *American Interest* 2, no. 6 (July 2007), https://www.the-american-interest.com/2007/07/01/beyond-the-cloister/.

48. Grant, "Why Airmen Don't Command," 46–47.

49. Of the 15 Air Force–led JTF headquarters, four were humanitarian relief operations, two were to help evacuate noncombatant evacuees, and four provided support to other forces. See Michael Spirtas, Thomas Young, Rebecca Zimmerman, *What it Takes: Air Force Command of Joint Operations*, (Santa Monica, Ca: RAND, 2009), 10–11.

50. Ibid., 10–11.

51. For example, Gen Darren W. McDew is the current commander of US Transportation Command.

52. Lt Gen Brent Scowcroft did not serve as the national security advisor twice by accident. His biographer cites many of the same themes that contribute to joint, strategic leader success. General Scowcroft was widely reputed as a consensus builder who tackled problems in a no-nonsense manner, held numerous posts well outside the Air Force norm, and was deeply intellectual (an intelligence officer, completed a doctorate from Columbia University, and taught political science at the USAFA). See Bartholomew Sparrow, *Strategist: Brent Scowcroft and the Call of National Security* (New York: Public Affairs, 2015). The second individual is a contemporary leader, the vice chairman of the Joint Chiefs of Staff, Gen Paul Selva. General Selva spent the bulk of his career as a functional specialist while serving in Air Mobility Command and eventually commanding US Transportation Command. In terms of professional military education, after graduating from USAFA with a degree in aeronautical engineering, he completed two social science degrees. However, General Selva spent two years as a field grade officer (FGO) in the Office of Net Assessment and then more than five years split between US Transportation Command and the Joint Chiefs of Staff as a general officer. With almost a decade of service in joint commands, General Selva is an example of how the Air Force's functional specialists can serve at the highest levels in the joint community.

53. In fact, promotion from company grade officer to FGO is the historical distinction from focusing on tactical tasks to integration of many elements of combat power by coordinating through staff actions.

54. This is already informal with the Guard and Reserve force or individuals who voice this desire as their intention.

55. This is an extremely important point. On the one hand, planning military operations is heavily influenced by key facts and assumptions that are givens based on the policy preferences of civilians or senior military leaders. On the other hand, inductive reasoning is more likely to lead to creative approaches because it may challenge the very assumptions upon which these arguments are made. For example, if military planners make strident arguments about the efficacy of military force in certain situations it may obviate negative unintended consequences. It is probably naïve, but this is exactly the type of moral courage and intellectual environment needed to advance national interests.

56. This is currently done primarily through faculty development programs at the USAFA and the USAF School of Advanced Airpower Studies. However, it is very difficult for those who serve as faculty at those schools to compete with their peers who remained steeped in the operational world.

57. This assumes the appropriate personnel actions are taken to systematically manage and reward individuals identified as future joint leaders.

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