

Developing Air Force Strategists

Change Culture, Reverse Careerism

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ADM Mullen addresses students at Air War College

Department of Defense (Chad J. McNeeley)

In a November 2008–February 2009 cross-governmental assessment of the geostrategic context in the U.S. Central Command region commissioned by General David Petraeus, there was a trend among team members to offer three simple words as a recommended strategy for the United States: *more, better, longer*. For whatever reason, many of these people, referred to by multiple media outlets as handpicked experts and strategists and the brightest minds in Washington, offered as their only idea that the United States needs to devote more resources, manage these resources better, and stay the course as long as it takes to win.

It has been nearly 14 years since Gregory Foster's commentary in *Joint Force Quarterly* on the dearth of strategic thinking in senior military ranks.¹ He asked then where our great military minds were, if there were any, or if senior military leaders even cared. We argue that the situation is worse today than it was when Foster wrote in 1996. How we got to the point where our best and brightest are able to offer only tired and uncreative strategies is not as important as what we need to do now. We must develop, nurture, and promote strategic thinkers. We define *strategic thinkers* as those officers who understand the inherent linkages between the abstract and concrete, between thinking and doing, and who eschew old checklists for new ideas and apply those ideas to potential future situations.

New Flight Path

The U.S. Air Force is today at a challenging point in its history; it is increasingly called upon to deliver effects in combat that cannot be achieved at the near-zero risk desired by political and military leadership. Yet at the same time, the Air Force is under assault for not doing enough to support other Services in the current fight and for seeming to be wedded to technology and “toys” when the civilian leadership directs it to consider alternatives.

Since the Air Force was once the peerless leader in technology, innovation, and modernization, how did it arrive at this current situation? The Air Force was *the* place to go if

one was a creative thinker and problem-solver. Many of the brightest minds historically gravitated to the Service. Yet today, many Air Force senior leaders privately lament the dearth of strategic thinkers despite the fact that the same generation of senior officers has not identified, promoted, or even encouraged strategists. This article considers some reasons why the Air Force is considering this issue today. It proposes a flight path to developing the strategic thinkers the Service needs to put itself back on the map as the center of intellectualism within the U.S. Armed Forces.

In October 2008, Barry Watts, of the Center for Strategic and Budgetary Assessments, published a monograph urging the Services to reconsider how they train senior leaders for developing strategy. He argued that while the United States does a great job teaching its forces to be proficient at the tactical level, the problems of strategy require a different skill set from senior leaders. As important as what Watts discussed is, it seems almost naïve to consider what he left out and what he assumed (contrary to his own advice) the Services, individually and organizationally, are capable of attaining.

Watts argued that the military needs to develop strategists either by better educating officers or by institutionalizing a place for strategists to live. Both of these efforts are ultimately doomed to fail and neither for malicious reasons. The first is illustrated by the fact that our professional military education (PME) system *believes* that it is educating strategists/leaders. In fact, the curriculum normally reflects the flavor of the day; it is not necessarily aimed at selected critical thinkers but at officers who show acumen at following directions and who pass through the right jobs to get promoted. Moreover, staff college and war college attendees are deemed future leaders not by any scientific method, but by an inconsistent evaluation by senior leaders. Furthermore, school attendance is viewed more as a “rite of passage” than a serious and rigorous honor that few are given access to, and where they are expected to perform at a higher academic level.

Despite the Chairman of the Joint Chiefs of Staff requirement to teach strategy,

there is little time within the curriculum to treat the subject seriously. In all fairness, the School of Advanced Air and Space Studies (SAASS) devotes its entire curriculum to strategic thinking, but that is a small number of officers a year compared to the much larger group of in-resident developmental education students. Also, Air University is making strides to enhance rigor within officer professional education through a distance learning Master's program as well as a new doctoral program. If those programs succeed and the graduates are placed in jobs using their skills, that will be a clear message to the Air Force that it must focus on producing strategic thinkers. But the problem is not with the few who seek to better themselves as strategists, but with the far greater gap between the need for strategists and the number we produce.

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Frequently, the Air Command and Staff College (ACSC) is asked by various senior leaders in Washington, as well as by congressional, joint, and Air staffs, how many hours it teaches on gas mask training, strategic failure in Iraq, airpower history, force protection, and on and on. These ad hoc inserts, often developed whimsically, leave little leeway to teach strategy in the curricula of the Service schools. At some point, the most well-meaning PME school commandants get tired and say, “Fine, just tell me what you want me to teach.”

The students are selected for Intermediate Developmental Education (for majors) and Senior Developmental Education (for lieutenant colonels and colonels) by a review of how well they were stratified in previous jobs and not by their ability to synthesize multiple streams and types of information into coherent inferences that can be applied to solving problems. They are selected based on how well they performed at the tactical level and not by any aptitude as strategists, or any other objective academic criteria. Furthermore, since they are a full tour (3 years) younger

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today than officers who went to ACSC in 2000, they have a full tour's less experience (as well as a full tour's fewer performance reports with stratification). According to published briefings by the Air Force Directorate of Manpower (A1), an officer is expected to spend the first 11 years of his career developing tactical expertise in a weapons system—not showing abstract thinking ability or spending time in a tour working on strategy.

It is true that since 9/11, students have far more combat experience than in past years, but that experience is tactical and not strategic. It is based on demonstrated skill connected to a specific weapons system (for example, the F-15 or Distributed Ground Station) and to a lesser extent on leadership at the small unit level, but not on critical examination and participation in the development of national and operational strategy. We do



Department of Defense

Gen Bernard Schriever worked outside staff structure to create Air Force ballistic missile and military space program

not in any way argue that we should sidetrack officers from combat leadership or diminish the importance of their experience, which heavily factors into critical reasoning. We merely point out that early tactical experience alone is *insufficient* for making a strategist.

Finally, the very dirty and not so secret truth is that majors in PME today are the products of an educational system in which many colleges and universities no longer hold students to the standard of being able to write coherent, logical arguments. An informal

survey among Air University academics reveals that it is even worse today than in 1996, when Foster said war college students did not write well and were “victims of a system that prizes decidedly non-objective advocacy.” This truth cannot be overstated. It is little different from the national studies showing college graduates not being able to write paragraphs or form cogent arguments. If Air Force senior leaders read a sample of even top-tier majors’ ACSC papers, they would be appalled at the students’ inability to read through a problem, think through it, and write a solution. Many of the papers submitted for awards or publication are heavily edited by faculty to ensure that they are cogent and worthy products; the students simply do not know how to conduct critical analysis. Indeed, there is no lack of passion in the papers, but there is a great void where evidence and reason should be. When some Air University leaders argue for grading according to the objectively earned grades of all students, others respond that the Air Force Chief of Staff would never stand for a large number of his top-tier majors barely passing the course.²

While Watts’s recommendations are truly intriguing as a possibility for reforming PME, he overlooks a truth about organizations that would make it impossible to reverse the trend in strategic thinking in only three generations, as he claims is possible. No military organization lasts intact through three generations since officers constantly rotate in and out and work narrowly focused issues rather than broad strategic concepts. Recognizing this truth, the Air Force, since its inception, has tried to separate strategic thinkers from the mainstream. Tom Hughes wrote in *Rescuing Prometheus* how the Air Force had to move General Bernie Schriever out of the staff structure and into civilian clothes to work with industry to build the intercontinental ballistic missile force. The Air Force could not think beyond the use of its on-hand platforms. Likewise, consider what has happened to the Air Force Doctrine Center and Checkmate. They were once seen as think tanks where true creativity could flourish apart from the insistent demands of line-of-sight tasking and monotonous staff work. Not any more. Even when these organizations were filled with big thinkers, these officers eventually rotated out, or their analyses were never allowed to rise to the notice of senior leadership. And no matter how valued a strategic thinker is, he is alone and has little

influence when he is separated from the main body of senior leaders.

Nicholas Taleb, in his pithy book *The Black Swan*, mentions that the military is the place where it is most vital for out-of-the-box thinkers to reside. But that does not mean they are valued. Taleb discusses how mankind consistently misses the unexpected events that fundamentally change the course of human history because it only looks to the future based on what it has observed in the past. But future war is almost never just like the past. Echoing Richard Hofstadter’s classic *Anti-Intellectualism in American Life*, Foster asserted in 1996 that “experience arms us almost always with conviction, hardly ever with wisdom. . . . undue emphasis on loyalty to the chain of command stifles dissent and erodes the spirit of inquiry so critical to institutional vitality.” This trend to rest on experience is one the Air Force must fight.

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Away from Intellectualism?

The Air Force should seek out those officers who have a balanced brain—those who can not only intuit well and rapidly, but who also understand when it may be necessary to look for theories that can be generalized. Instead, the Service teaches “people, processes, and products” that make up the Air Operations Center at its command and staff college. It has often been said that generals in the Civil War went into battle with a sword in one hand and a copy of Antoine-Henri Jomini’s *Art of War* in the other. Jomini would have loved this picture, resting securely that this was warfare fought “properly.” But war was not proscriptive then, and it is not today. We need leaders who can break out of a rule-based paradigm.

There is no career path for strategists or strategic thinkers, and indeed there appears to be a trend away from intellectualism. The Air Force Ph.D. program at Air University and even the distance learning Master’s program have met with strong budgetary and cultural resistance. Rather

than disdaining intellectualism, senior leaders should be encouraged to read recent scholarship on strategic decisionmaking and ask themselves if they can learn something there. In addition to the long list of histories of command and leadership, Air Force senior leaders should have to read Scott Page's *The Difference*, Malcolm Gladwell's *Blink* and *Outliers*, James Surowiecki's *The Wisdom of Crowds*, and most importantly, Alec Fisher's *The Logic of Real Arguments*. Gladwell tells us that we all "thin slice," whether we mean to or not. He also argues that few of us are any good at thin slicing and that most of those who are good at it are only good in a narrow specialty. He does tell us we can get better by building depth of knowledge and breadth of experience. Surowiecki and Page tell us that in general, any diverse group will come up with a better answer than any single expert or small group of experts with similar backgrounds. That should be a huge, empirically validated warning to our leadership not to promote only those who look like themselves.

The balance between Gladwell and Surowiecki should be lessons that all senior officers learn en route to becoming strategists. Giovanni Gavetti and Jan Rivkin, in *How Strategists Really Think*, tell us that one of the greatest mistakes leaders make is applying the wrong experiential analogies to the situation at hand. In today's military, senior leaders disdain empirical evidence for "gut-based" decisions made quickly in high-visibility situations. As Watts mentions, too many of our leaders go on experience and apply lessons from the past to the problem at hand. The current problem, however, is rarely like any they previously faced; thus, the lessons they bring forward are not relevant. Experience is important, but for senior leadership we should seek out those who can adapt to the situation no matter what it is. Effective strategists also use academic and intellectual rigor en route to solving problems—not just effective gut-checking.

But this goes against how the Air Force selects people for school and more importantly how they are managed through subsequent assignments. Watts claims, "Most officers in combat arms will have gotten where they have in their service careers based mainly on demonstrating tactical competence, and few are likely to retain the mental agility to move beyond tactics. . . . mental agility to make the transition from tactics to

operational art or above tends to be either present in officers well along their careers or not." This is not necessarily incompatible with selecting critical/strategic thinkers, but it is a Venn diagram instead of a neat overlap. So the Air Force should decide whether it wants anointed top-tier officers sent to PME for a perfunctory break from the demands of unit level activity plus the bonus of a Master's degree, or a cadre of true strategic thinkers without regard to their career field and operational experience. If it is the former, we need do nothing today. If it is the latter, we need to understand the implications because of what strategic thinkers are expected to do.

It is critical to realize that one cannot separate conducting the operational level of war from advising national civilian leaders and developing national strategy. Samuel

asked the military to come up with objectives and endstates in the Balkans. He left it to the military to figure out. The George W. Bush administration was not only interested in international affairs but also asked the military for help with determining objectives and endstates. Then it used its own small group of insiders to develop strategy. Military leaders and mid-level staff officers must be comfortable and effective in both the operational and strategic realms.

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Crew maintains F/A-18 Hornet between airstrikes on Iraq during Operation Desert Fox

U.S. Navy (Nicholas H. Griseto)

Huntington's three responsibilities of a professional officer—informing national leadership of requirements for national defense, advising national leaders of the implications of alternative courses of action, and carrying out orders no matter how distasteful—are an enduring example of this inseparability, either practically or ideologically. Senior military leaders cannot expect civilians to develop a strategy and hand it to the military to implement. President Bill Clinton focused on, and was more experienced with, domestic affairs, and

It is for this reason that we urge the Air Force to select and promote more officers who think in the abstract. We need more individuals from the liberal arts who can form heuristics reflecting the uniqueness of the problem at hand. Today, the military is heavily populated with deductive thinkers. We think there should be a greater balance with those comfortable with inductive reasoning. Each person has some ability in both ways of thinking, but most think one way or the other. Still, the cutoff point

for that line is in a different place for each individual.

One excellent example of critical reasoning never written into any book or article was found in 1997 in Joint Task Force–Southwest Asia. Air Force fighter crews knew there were numerous Iraqi surface-to-air missiles (SAMs) south of where they were allowed because the Iraqis actively tracked U.S. jets from these positions on almost every mission. But those SAMs never showed up on the orders of battle. The U.S. Intelligence Community refused to believe the SAMs were there because their national systems did not detect them. It was not until the situation was forced and intelligence assets were specifically tasked to look for them that the order of battle suddenly exploded with “new” SAM sites, causing a cascade of planning that ended with Operation *Desert Fox*. The heuristic of the Intelligence Community was that fighters cannot see the “real situation,” and if intelligence assets do not see it, it simply is not there. The community had no ability to see beyond its narrow heuristic even when confronted with new data.

Habits of Mind

Many will argue that if we cannot learn from experience, there is nothing we can know. We do not claim that experience is irrelevant; there is much one can learn and apply from experience. The art lies in understanding how to apply past experience to present situations, and knowing when that does not work. While we may never be able to identify and quantify every variable, we should be able to identify the common variables from case to case and apply them in new or unique ways, or break them down and apply lessons from disparate experiences in innovative combinations. That is why there is the study of social science. Are we open to scientific research and empirical testing or not? The Air Force should be. Sadly, the pace of current operations and the demands on our leaders mean they are often too busy working their Blackberries on the commute home or checking email and the slides for their next briefing to read and reflect.

Preparing the Air Force for the next conflict by even the most rigorous training based on past experience can make us the best bomber, fighter, and cyber warriors in the world, especially if the coming conflict looks exactly like the training scenarios we develop. But in a not so funny fact of history,

wars always result in operational and strategic surprises. America’s military *never* thought beyond the first battle. The onset of war was usually greeted with great fanfare. However, war is fickle and usually turns on its masters. We have reidentified that lesson the hard way since 2001. Whether we will learn it remains to be seen.

We contend that the U.S. Armed Forces need to do strategy better; they cannot wait for Presidential approval or participation of other agencies to develop strategists. We do not think the Services have been absent from decisionmaking altogether. Rather, they have not recently produced good ideas beyond short-term (and sometimes parochial) goals. Many in the military are desperate for direction from civilian leaders to develop strategic thinkers. The Armed Forces must indeed embrace strategic thinking on their own. The American people expect no less. But how?

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The Air Force must embrace strategic thinking from its senior leaders all the way down through PME. Strategy is difficult, but we do not need to *rediscover* how to do it. We need to train to it. Carl von Clausewitz provided an excellent methodology almost 200 years ago. Strategists need to have certain habits of mind:

Theory will have fulfilled its main task when it is used to analyze the constituent elements in war, to distinguish precisely what at first seems fused, to explain in full the properties of the means employed and to show their probable effects, to define clearly the nature of the ends in view, and to illuminate all phases of warfare in a thorough critical inquiry. Theory then becomes a guide to anyone who wants to learn about war from books; it will light his way, ease his progress, train his judgment, and help him to avoid pitfalls. . . . It is meant to educate the mind of the . . . commander, or, more accurately, to guide him in his self-education, not to accompany him to the battlefield.

Let us consider the evolution of jointness as an analogy to explain the problems of creating strategists. Jointness demonstrates

the difficulty of making the Services adopt a concept that is internally and externally foreign to them. It cannot be legislated, although many think the Goldwater-Nichols Department of Defense Reorganization Act of 1986 provided a kind of magic wand approach. Legislation and organizations and the like had a role in *mechanically* making the Services more joint. However, it was the willingness of each Service culture to change itself that determined successful integration. The underpinning of success throughout the Defense Department was the realization that no single Service, no matter how much it needed to compete with the others for supremacy, could achieve objectives on its own. Strategy possesses the same characteristics: it cannot be legislated, it cannot be bureaucratized, it cannot be forced, and it cannot be ordered. It can only be recognized as important and sought after as a worthy pursuit in its own right.

What we need is to cast a wider net to find senior leaders and strategists. The Air Force currently has a homogenous senior leadership corps. This is not based on a particular mold or model we want leaders to resemble. It is a default result of a promotion process that necessitates multiple early promotions to be competitive for leadership (squadron/wing/group command) and general officer rank. To earn those early promotions, an officer must be (ideally) positioned for general officer consideration by the 24-year point. This means that those officers competitive for general will have had a similar career track that included operational assignments with one or at best two short staff stints to include a minimum of 22 months in a joint assignment. Those with diverse or nonstandard experiences in national security assignments, attaché positions, and as instructors at the academies or PME schools are unlikely to have been positioned for command and thus promotion. Unlike the Army, which has one O-6 level command and expects officers to make general in 25 years, the Air Force necessarily limits an officer’s strategic depth by its singular promotion track. While there is no substitute for time and experience when promoting officers to the strategy/decision level, we should be able to accept that they need not all have reached a particular rank by an artificially early career point.

Another part of the overall picture is keeping officers, in particular senior officers, in place longer. The current rate of officer

moves is still 18 months, and senior officers move approximately every 14 months. Such rapid movement gives little time to even get acquainted with the specifics of the job at hand, let alone engage in strategy. Furthermore, there is little opportunity to read, ponder, and consider the best approach for the future. Officers can barely keep up with the inbox, emails, and Blackberry traffic. At the same time, an adept strategist is not tracked through the assignment process and given more opportunity to continue to strategize. The normal process is to get back to the “expected” career track as quickly as possible. That means getting to a command, getting back in the cockpit, or moving as rapidly as one is able to the “operational” components of the Air Force. In fact, many officers deeply fear and disdain (at least outwardly) the notion of a tour as a strategist. Many view such an assignment as a painful sidetrack to be endured, not embraced, and certainly

not sought after. In order for the Air Force to develop and retain strategists, that must change.

In a forthcoming study commissioned by the Robert Wood Johnson Foundation, researchers found that when determining the accuracy of medical diagnoses, it was better for expert panels either to have more people (to increase chances of diverse backgrounds) or for experts to be paired with assertive and empowered nonexperts who could challenge expert opinions. Two experts from the same background are actually less likely to get the right answer than less experienced panelists from varied backgrounds. While there are certainly outliers to the mean, average

Air Force officers, regardless of their race or gender, come from similar and narrow experiences and are often unable to accept that a correct or even better strategy can come from outside their own cognitive models. After all, if they were not the best, they would not have made it to their senior rank. It is normal human inclination to recreate ourselves—thus, the trend toward a templated promotion process that results in a common core of experience at the decisionmaker/strategist level.

We mentioned earlier the trend toward relying on experience rather than critical thinking and inductive reasoning. Inductive reasoning is not hard merely for military officers, but for almost everyone. In Taleb’s *The*

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U.S. Air Force (David Armer)

Black Swan, he argues that because humans rely so much on past experience, they cannot conceive of a situation that has not happened before. Until black swans were discovered in Australia, the notion that a black swan could exist was beyond the experts' imagining simply because one had never been seen. But military officers need to be prepared for more than swans of a color they do not expect. They must deal with situations of national security that can spell success or doom for their country.

What is really important is the ability to put together dissimilar experiences, married with effective training and analytical tools, to create a new paradigm to match the challenge at hand. We need to make an elastic way of thinking the norm to better integrate theory and experience to create the right solution. We must develop inductive reasoning among our officer corps to balance out the deductive reasoning tilt.

Inductive reasoning is only one attribute of successful strategists. They must also exhibit:

- creativity
- curiosity
- confidence
- high intelligence without subject fixation
- ability to collate and make sense out of massive amounts of data
 - great and diverse intellect
 - thorough knowledge of the means
 - intuitive understanding of the ends.

The first four traits are either inherent or not. For the last four, there is education. We place creativity at the top because crafting strategies, like war itself, is an art. We posit that educating an officer to be a strategist is for naught if the first four traits are not present. The trick is to identify officers with the first four traits and mark them as candidates for advanced education and eventual placement on a strategy team.

We must demand more of our officers—not in terms of time or energy (most give more than their fair share whether they have it or not), but in terms of how they *think*. It is not as simple as faculty being tougher on PME students. Air Force senior leadership would have to expect more from students for an entire generation for that demand for excellence to sustain itself. The greater the demand for excellence throughout the continuum of learning and experience, the larger the pool

of potential strategists is each year. Right now, every staff wants PME graduates because it is accepted that they have read more widely and have learned to think “better” than other peers. If we raise the bar for all officers, then we will not have to fight over PME graduates and hope that if we do get one, he or she turns out to be a good strategist.

In short, we should not worry about creating a metric for determining who is a strategist before duty calls. No profession can do that. Despite the schooling and preparation, some fail the test of actually *doing*. Jomini is prescriptive and asks his students to be deductive thinkers in the application of his theory. Clausewitz is educational and asks his students to be inductive thinkers and to reason their way through the challenges of war. These two theorists presented lessons we need to meld together for today's challenges. Whether a strategist is developed by nature (born) or by nurture (education) is a question we cannot answer. However, those who are not born strategists will get better, and they will have a clearer appreciation both of the need for strategy and of its requirements through the increased focus at PME, and programs such as SAASS. More importantly, those who are born strategists have the environment and career track to become great.

Finding Balance

Who, then, should be the Air Force's planners and senior leaders? Again, the Air Force needs both inductive and deductive thinkers—but with broad experiences, especially combat testing when applicable. Planners and senior leaders should be steeped in the liberal arts and not only science and engineering. But what sort of individuals fill our officer corps and serve as our planners today? They are primarily deductive thinkers who disdain liberal arts and commonly have engineering or technical degrees.

There is good reason to fear producing clones because we are all different. The challenge becomes assigning individuals to positions according to their abilities. This is where we are failing. We are not confident that our strategic culture would be comfortable systematically identifying inductive thinkers and routing them into war planning and related leadership positions. We are convinced that, if given the chance, experiential deductive thinkers both within the Air Force and outside severely threaten the very existence of the Service. It is difficult to deductively

develop strategies to make use of airpower's inherent strengths and capabilities apart from narrow support roles for troops on the ground. These leaders have never been forced to think outside of their experiences. We must ensure that our senior leaders and planners are diverse in background and experience.

Let us be clear on one point: deductive thinking is required in campaign planning and in airpower theory, especially when it comes to establishing quantifiable metrics and measuring against them. Pressed up against the realities of war, deductive thinkers do a great job killing the enemy, but it is inductive thinkers who master how to discourage enemy forces from wanting to continue to fight. And it is inductive thinkers who are best able to determine how to achieve victory on a variety of battlefields against innumerable conflicts and challenges. The metrics to measure each are very different. One is an empirical count while the other cannot be measured.

Airpower and effects-based operations more or less make war a studio that gives the artist long brushes to paint with—but the policymaker owns those brushes. We are not talking about painting with paints, but with violence, so it is only fitting for the policymaker to keep ownership of the brushes at all times. For this, our officers must be prepared to think beyond their narrow experiences. They must look different from one another. Our officers must be broadly read, and they must be comfortable with multiple constructs of thinking. It is not too high a bar to set. **JFQ**

NOTES

¹ Gregory D. Foster, “Research, Writing, and the Mind of the Strategist,” *Joint Force Quarterly* 11 (Spring 1996), 111–115.

² Two of the authors were Vice Deans at Air Command and Staff College (ACSC) while another was a faculty member. Four were students at ACSC, and all five attended either civilian postgraduate/doctoral programs and/or sister Service fellowships.