Airmen and the Art of Strategy

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The Nation that makes a great distinction between its scholars and its warriors will have its thinking done by cowards and its fighting done by fools.

—King Archidamus of Sparta, as quoted in Thucydides' *History of the Peloponnesian Wars*

Circumstances vary so enormously in war, and are so indefinable, that a vast array of factors has to be appreciated—mostly in the light of probabilities alone. The man responsible for evaluating the whole must bring to his task the quality of intuition that perceives the truth at every point.

—Carl von Clausewitz

The Words of wisdom cited above span the ages and reflect two eternal truths: first, that war is a uniquely challenging human endeavor; and, second, that strategic thinking is as difficult as it is vital. These fundamental ideas frame both the logic of this essay and the rationale underlying the decision to launch ***Strategic Studies Quarterly*** (*SSQ*).

Men have fought wars since remotest antiquity on land and at sea. We fight them still today on land and at sea, and, since the twentieth century, we also fight in and through the air, space, and cyberspace. The breathtaking changes these millennia have seen in humanity's way of life and in the environment we have created for ourselves are matched by fundamental transformations in the character and conduct of war in terms of who fights where, when, and how. Yet war persists essentially unchanged in its most fundamental, primordial nature as a clash of opposing wills and intellects.

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Although war represents human violence in its most extreme form, war is not simply organized violence. War is a political act, employing force to promote or defend a set of interests. It is the violent outcome of a calculated, conscious decision that there is more to be gained by fighting than by remaining at peace. As war became institutionalized over the centuries, a new profession emerged: the guardians of the nation's defense and the masters of the unique skills necessary to fulfill a function so vital that without it civilization would perish within a generation. ***Strategic Studies Quarterly*** is a forum for this increasingly diverse national security elite of warriors and scholars.

There can be few decisions more crucial—or more momentous—than determining whether, when, how, and to what end the nation should commit blood and treasure. These issues are, in Sun Tzu's words, "of vital importance to the state—the province of life and death, the road to survival or ruin." All deserve to be studied seriously; all touch the very essence of the profession of arms. Yet, none has ready-made, universally acceptable answers. And no one Service or Agency can claim a monopoly on either posing the questions or framing the answers.

Many of this journal's readers have been engaged, at various levels, in implementing decisions with strategic effect, some over 16 years of continuous combat. We realize that using other, nonmilitary instruments of statecraft to promote and defend the national interest might be more desirable, frugal, and humane than armed combat. We also know, however, that if we are required to fight, we fight to win. Therefore, we must have both the material and the intellectual tools to do that at the strategic level. To paraphrase Thomas Jefferson, if "wars must sometimes be our lot," it behooves us to learn how "to avoid that half of them which would be produced by our own follies," and prepare as best we can to fight and win the other, unavoidable half. The wisdom to know the difference is, ultimately, what strategy is all about.

Accordingly, ***Strategic Studies Quarterly*** will be an important addition to our leaders' intellectual arsenals. Reading, thinking about, and contributing to the strategic discourse we intend to conduct on these pages should be a critical element in the lifetime pursuit of professional excellence that is the duty of every Airman. I challenge you to engage with fellow Warriors from all Services, professionals across Federal Agencies, and scholars in universities and think tanks in the quest to master the strategic art and understand the many dimensions of war and peace.

The Art of Strategy

As a long-overdue venue to voice Airmen's unique perspectives, subsequent editions of ***Strategic Studies Quarterly*** will no doubt examine these issues in more detail. For this inaugural issue of the ***Quarterly***, it is appropriate we begin with a succinct reminder of foundational concepts such as **strategic theory and practice, innovation, and holistic thinking**. These concepts are inextricably linked to—and reflected in—*SSQ*'s core purpose: Developing Airmen for strategic leadership.

Strategic theory and practice constitute the intellectual foundation of the profession of arms. The function of any theory is to describe, organize, and explain a body of knowledge. Strategic theory has an added function: it guides action. Thus, it is nothing if not pragmatic. To paraphrase Bernard Brodie, strategy is a field where practitioners seek truth in the pursuit of viable solutions. The focus of strategy is on the *ways* in which available *means* could be employed to achieve the desired *ends* with acceptable *risk*. Therefore, the first strategic question is, will this "brilliant" concept actually work under the special—and usually unknowable—circumstances of its next test? Often, that next test of the ends/ways/means/risks solution is the crucible of war, where the opponent gets an equal vote.

Throughout your future careers, you will be developing and implementing national security strategies and war plans. Your actions (no matter how far removed from the actual fight) and your recommendations (no matter how compelling they might seem as a PowerPoint brief or a policy memorandum) will have real and often far-reaching consequences. My advice to you is to always ask, is there a better way? Stay focused on the ends, don't confuse ways with means, and remember to factor in the inevitable differences between planning and execution. If we are at war and we get the military strategy about right, people will be killed; if we get it wrong, *lots* of people will be killed. We must always consider how strategic decisions might impact operations and how, in turn, tactical and operational realities might limit the range of options available to the decision maker.

Innovation is the ability to think anew and develop creative approaches to changed circumstances. Some military innovations involve science and technology; their product has been new weapons systems that changed the face of warfare. Other, equally significant, innovations come in the realm of ideas and organizational designs. In either case, the ability to innovate rests on foresight—that is, the aptitude to read current and emerg-

ing trends, as well as to anticipate their future potential. Innovation also requires moral courage, perseverance and, often, readiness to "break some glass"—especially in large bureaucracies.

Throughout history, some leaders chose to stick with comfortable assumptions and time-tested constructs, failing to realize that the strategic environment had fundamentally changed. Victory tended to shine on those who were able to grasp the potential for innovation and figure out how to fuse concepts, technology, doctrine, and organization into an overwhelming combination of effects. Their gift was integration, or holistic thinking.

Holistic thinking is an approach which captures both the whole and its component parts; grasps multidimensional, dynamic relationships as they are today and as they might evolve tomorrow; yet does not assume—or expect—linearity, perfect coordination, or clear-cut answers. Absent a holistic approach, our universe of possible constructs would be little more than a series of disconnected loose ends. Moreover, successful strategic designs must be integrated both horizontally and vertically. Even the best military operation will be an abject failure if it does not support the overarching political strategy. Likewise, a brilliant strategy unsupported—or unsupportable—by reality at the tactical and operational levels is, at best, an interesting academic exercise or, more often, a prescription for disaster.

Strategy is both an art and a structured intellectual process. It is the constant adaptation of ends, ways, and means to shifting conditions in an environment where chance, uncertainty, friction, and ambiguity dominate. To complicate matters even further, strategy is a multisided affair, wherein the objectives, intentions, actions, and reactions of other participants—both allies and opponents—are often obscure, or at least variable. A wide variety of factors—politics, economics, geography, history, culture, religion, ideology, etc.—influence strategic behavior in subtle but important ways. These realities require a much broader, more integrated, more conceptual approach than most of us have grown comfortable with. For the essence of strategic effectiveness is the ability to connect seemingly disparate activities, issues, and areas of concern into a coherent whole. This is the kind of holistic approach we'll strive to foster and articulate in the pages of ***Strategic Studies Quarterly***.

There is an art to developing and implementing a coherent strategy—an art that requires imagination, creativity, and sound logic. Military strategy is not developed in a vacuum. Any use of force is, ultimately, a political act. Therefore, the nature of the strategist's mission demands that it be

approached in the context of its environment, factoring in and taking account of a vast array of dynamic variables—which further compounds the inherent complexity of solving the ends/ways/means/risks equation. This task requires rigorous, precise thinking and the ability to reconcile—or choose among—competing courses of action. There are no easy answers to guide the strategist except the knowledge that the only alternative to an integrated approach is inconsistency, wasted effort, and increased risk.

Strategic effectiveness comes from a coherent, synchronized approach sustained over the long term and guided by a clear vision of the desired end state. Foresight and flexibility—informed by the harsh lessons of history—are the keys to success, as is the ability to fuse a wide variety of actions, issues, and equities into a logical whole. Frankly, this kind of holistic thinking is rare precisely because it is so difficult. It is difficult precisely because it requires the widest possible perspectives developed over a lifetime of professional and intellectual development. Consider ***Strategic Studies Quarterly*** a forum to practice this art, to hone the intellectual skills that are the essence of strategic leadership, and to develop relationships with those who seek to develop their own holistic thinking skills. The stakes are so high that it is not enough merely to make the attempt—it is *vital to our national interests and those of our allies and partners to develop an institutional culture that fosters holistic thinking*. We owe that to our Air Force, our Joint Team, and our nation.

The Crucible of History

If you need an example of a failure to match military design with strategic purpose—with disastrous consequences—the First World War is definitely "Exhibit A." No other war comes close. It was clear within weeks of the war's outbreak that the Schlieffen Plan on which the Germans had staked all had utterly failed; so had the French Plan XVII. Within a couple of months it was clear—or at least should have been clear—that the war was going to be exceedingly costly in blood and treasure and that a quick strategic victory was all but impossible. Yet the carnage continued for four miserable years, killing millions and scarring several generations.

The scale, velocity, and intensity of the violence that erupted in August 1914 were beyond the experience and comprehension of those responsible for directing and conducting the war. The result was intellectual paralysis. The sheer might of the opposing armies seemed to overwhelm enlightened

thought about how to harness that power to a viable political cause. No one could discern a winning approach. Unable to gain advantage, the combatants dug themselves in—both literally and figuratively—resigned to slug it out until they exhausted their resources and their will to continue fighting.

Airpower was born in this crucible, which history regards as one of the most ineptly fought wars in history. By opening the vertical dimension, airpower promised to restore maneuver to the positional stalemate and break the intellectual deadlock that condemned Europe to four years of unprecedented death and destruction. It offered a viable alternative that would minimize—if not avoid altogether—the loss of life and treasure inherent in a land war and sidestep the horrific cost of symmetric attrition. Yet, even after aviation's potential was conclusively established in the Battle of Saint Mihiel, it took a decade—and, ultimately, another world war—to fundamentally transform entrenched constructs.

In contrast, by the fall of 1941 the US Army Air Forces had developed and submitted the air component of the overall American military's "Victory Plan" for World War II. Highly complex, detailed, and visionary (recall that it was submitted prior to American involvement in the Second World War), the Air War Plans Division Document 1 (AWPD-1) was, in a nutshell, a fresh strategic approach that gave the nation a new way to wage and win a global war. With war raging in both Europe and the Pacific and with the US on the precipice of conflict, four air planners—former Air Corps Tactical School instructors Colonel Hal George, Lieutenant Colonel Ken Walker, Major Haywood Hansell, and Major Laurence Kuter—developed a roadmap to create an essentially independent air service that could simultaneously wage strategic air warfare, fight a tactical fight, resupply forces on a global scale, and win a world war. Clearly, these were no small feats. But as Hansell would later say, "If the task was staggering, so too was the opportunity."

Today's Strategic Challenges

Today, with the nation at war, we face similarly daunting tasks. But our opportunities are equally great. Today the nation once again demands Airmen who can think strategically. Like the current Global War on Terrorism, US involvement in the Second World War started with a surprise attack on US territory; the times called for a total commitment and quick adjustment to unexpected imperatives. Along with war-fighting and organizational skills, intellectual agility and adaptability—the ability to innovate—proved

to be the keys to victory. These very skills are also second nature to Airmen. If we are to win today's war and prepare for the uncertainties of tomorrow, we must make our talents count once again. Developing a strategy to match our tasks is a difficult one that seeks to reconcile ends, ways, and means; mitigate risks; and balance present imperatives with future considerations—all in an environment where chance, fog, friction, and ambiguity dominate. It is a difficult and imprecise art. But it is also a necessary endeavor if we intend to continue to be prepared to fulfill our enduring tasks no matter what kinds of challenges the future holds.

Today, as in 1941, we face conditions we had not planned on or prepared for, requiring us to adapt in the midst of a fight, learn from experience, and quickly evolve new approaches and procedures—often fielding new, untested technologies—to solve emerging problems. Today, as in 1941, we have the opportunity—and the responsibility—to shape the Air Force for the next century. The Global War on Terror and radical transformation of the strategic environment demand an equally radical transformation of how we approach the problems of national security. Our air-, space-, and cyberspace-minded perspectives and skills must not be absent from this strategic policy development process. If Airmen do not propose options derived from our unique perspectives, no one will. We have already begun important, long-term efforts to *materially recapitalize* our air and space systems. It is now also time to *intellectually recapitalize* as well.

There is an urgent need to do this, given the world's fundamental transformation since 1990 and given the likelihood of further unprecedented change in the years to come. Since 1990, empires have collapsed, the Cold War has ended, Desert Storm and Allied Force have been fought and won, and Americans have been attacked on American soil. The United States is now engaged in a new kind of war with a new, implacable enemy that invokes an extremist brand of Islam against America and our allies; is not tied to geographic boundaries; operates in nontraditional domains; employs nontraditional means; and is unbound by established norms of international behavior. A long, global war against this enemy is simply unavoidable.

But while the war is an important and emotional issue and demands significant resources, combat in Iraq and Afghanistan is not our only concern. It cannot be; we do not have that luxury. Even as we wage—and strive to win—the Global War on Terror, our nation and Air Force must also prepare for emerging threats at all levels of warfare. We have to be ready to deliver sovereign options to defend the United States, its inter-

ests, and its ideals, given a host of changes and challenges in the international security environment.

The end of the Cold War and the advent of the Global War on Terror set the stage for tectonic shifts around the globe, with repercussions that are still unfolding. In the coming years, massive political, economic, societal, cultural, and technological upheavals will determine the amplitude and direction of even more global change. Worldwide demographic trends such as changing age structures, urbanization, population growth, and population density movement could have increasingly significant impacts and potentially cause conflict around the world. Sparked or amplified by these conditions, ethnic, cultural, and religious discord may lead to violence that weak or failed governments are incapable of containing. The global economy remains vulnerable to shocks and cycles that could trigger even greater social and political instability. Competition over scarce resources—oil and natural gas, water, and arable land, just to name a few—may also cause conflict.

Fueled by quantum leaps in nanotechnology and computational power, increasingly sophisticated next-generation threats with more killing power than ever are proliferating at relatively low cost around the world. Unlike the procurement hiatus the entire US military was forced to take during the 1990s, our present enemies and future competitors did not take a break from modernizing their systems. Armed with new equipment, they are fielding capabilities spanning all three of our war-fighting domains, challenging our dominance of air, space, and cyberspace and potentially hindering US forces' ability to prevail in a future fight.

For example, our aircraft will face increasingly lethal antiaccess weapons that threaten to make entire blocks of our weapons systems obsolete. At least one nation has successfully tested an antisatellite weapon, eliminating consideration of space as an international sanctuary. We consequently face competition—if not outright confrontation—with other countries in an environment we used to consider a safe haven. Peer competitors have declared the electromagnetic spectrum as the "fifth battlespace," and we are seeing more sophisticated attacks occurring daily in cyberspace. There is a virtual "terrorism university" on the Internet, helping mobilize, train, and finance terrorist networks, not to mention tarnishing America's image with propaganda. Both state and non-state actors have improved their cyber capabilities and now maneuver effectively within this domain. Unlike in the air and space domains, in cyberspace there is no clear delineation

between war and peace. The inherent physical characteristics of the cyber domain facilitate seamless and constant maneuver without the constraints of physical or even temporal presence.

But if we focus simply on countering future threats, we will fall short of delivering the cross-domain strategic effects our nation demands. We may not be able to predict the thrust and vector of any one of these changes or the synergies they might create together, yet each of them could ignite a conflict that engulfs us in the future. If the United States of America—as the world's sole superpower—is to maintain its ability to dominate peer competitors, dissuade dangerous actors, ensure global freedom of commerce, and defend freedom and the inherent rights of man, its military must be prepared for a full range of possibilities. The art is to ensure our future readiness—material and intellectual—while simultaneously waging a global war.

An Airman's Response

Accordingly, I see a need to increase the quality and quantity of Airmen's voices in the strategic debate. If we do not become more regularly vocal and more regularly heard and heeded at the strategic level, we risk our thoughts and thinking being channeled into tactical- and operational-level discussions or limited to programming for systems whose designs we did not get to shape. Consequently, we risk being associated with—if not defined by—the material *means* of strategy, rather than its *ends* and *ways*. I challenge each of you, in the pages of ***Strategic Studies Quarterly*** and in other venues, to change that, beginning right here, right now.

It is our duty to make our voices heard; to ensure we extend our expertise to the public strategic discourse; and to articulate our raison d'être, unique character, and many contributions to national security. The United States of America is an air-, space-, and cyber-power nation that derives much of its global influence from the ability to act in and dominate these three war-fighting domains. In that vein alone Airmen are indispensable. But Airmen also bring a unique *perspective* to the public strategic discourse that adds further value.

Think about it: an Airman's perspective is, by definition, multidimensional, global, and strategic. We instinctively address problems in a comprehensive, three-dimensional, nonlinear manner, and we intuitively factor in the fourth dimension: time. Our way of thinking starts at the top, with the first-order, overarching determination of desired effects. We systemati-

cally work our way through the ensuing tasks and second- and third-order consequences. We size up situations, integrate seemingly disparate data points, seize on opportunities, and act decisively. We plan and flawlessly execute air, space, and cyberspace campaigns—arguably the most complex of all military undertakings—involving the employment, orchestration, and synchronization of literally thousands of moving pieces, operating from just above the planet's surface all the way into deep space, to achieve desired effects within a compressed timeframe.

Ensuring that our perspective remains a part of the public national security discourse requires constant vigor. Our last publicly proclaimed, original conceptual design was "Global Reach–Global Power," developed by Lieutenant General Dave Deptula and signed by Secretary of the Air Force Donald B. Rice on 13 June 1990. Ten years later, on 19 June 2000, we added "Global Vigilance" to this guiding construct. It still stands as our overarching strategic architecture 17 years after it was originally conceived, which speaks to its enduring value.

At the same time, it is fair to ask, have we become conceptually stale? Have we grown too comfortable with established, time-tested assumptions? "Global Vigilance, Global Reach, and Global Power" are elegant and almost timeless concepts. They do, after all, encapsulate in a phrase what the Air Force does for the nation. But we cannot be complacent about them and what they mean. We have to keep abreast of changes in technology, theory, and practice. The burden remains on us as Airmen to revitalize the application of these concepts and ensure they remain fresh, compelling, and relevant.

Redefining Airpower for the Twenty-first Century

The mission of the United States Air Force is "to deliver sovereign options for the defense of the United States and its global interests—to fly and fight in air, space, and cyberspace." The transformational aspects of this mission statement should not be lost on Airmen, the American people, or the world at large. While firmly rooted in our enduring core purpose—flying and fighting—the mission statement redefines airpower for the twenty-first century in two important ways. First, it adds cyberspace—the domain of electronics and the electromagnetic spectrum—to our traditional air and space areas of responsibility. Second, it alludes to the cross-domain synergies we see as possible, given our dominance of these three war-fighting domains.

Our mission statement represents a sea change for the nation's Air Force. We still see the first responsibility of any commander as dominating and projecting power in his domain. But with our mission statement we extend the time-tested principle of "command of the air" as the prerequisite for success in all ensuing military actions—on land, at sea, and in the air—into two additional domains: space and cyberspace. At the same time we elevate cyber to a distinct maneuver space on a par with land, sea, air, and space, we also begin to evaluate what can be achieved through dominance across the three war-fighting domains that are the province of Airmen.

Our ability to integrate effects across our domains, then affect other domains, creates powerful synergies for the Joint Force. It gives the US Air Force a unique ability to *surveil* the battlespace—a battlespace that already encompasses virtually the entire planet—keeping a persistent, vigilant eye on targets and activities around the world from the vantage points of air, space, and cyberspace. Cross-domain dominance allows Airmen to also *range* the entire surface of the earth and continue to surveil those activities or targets, hold them at risk, or strike them when ordered. Airmen then have the flexibility to choose effects that will best fit national objectives, and deliver those effects precisely at previously unachievable ranges and speeds. Cross-domain capabilities give us the ability to achieve effects other Service elements cannot or do not, delivering lethal, kinetic effects at the speed of sound; delivering lethal or nonlethal, nonkinetic effects at the speed of light through cyberspace; delivering cargo for humanitarian aid and military personnel in combat; and delivering Joint and Combined forces to their battlefields so they can do their jobs. Cross-domain dominance gives Airmen the capacity to save the lives of our comrades in arms and minimize the human toll of war.

Airmen also have the unique ability to *command and control* (C2) US and coalition air, space, and cyber activities around the world. Airmen seamlessly integrate airborne, ground-, space-, and cyber-based platforms to detect, track, and identify targets on the surface, at sea, in the air, and in space, then battle manage our assets to deliver the appropriate effect. C2 capabilities ensure friendly-force accountability, an increasingly important requirement given the nonlinear, noncontiguous battlespace in which we operate today and expect in the future. They speed progress through the kill chain by delivering precise, timely, and accurate information even on mobile, fleeting targets. And they enable centralized control of air, space, and cyberspace operations with decentralized execution, a doctrinal tenet that will be even

more critical in tomorrow's uncertain environment. Finally, Airmen have the ability to *assess* effects in real time or near-real time, be they kinetic or nonkinetic, physical or psychological, across three war-fighting domains.

To reach new horizons of conceptual and technological innovation, to take full advantage of and to push the boundaries of our cross-domain dominance, we need the full involvement of Airmen's intellect, foresight, and holistic thinking. We need to forge new relationships with intellectuals who dedicate their careers to researching, analyzing, and teaching about war and peace. "Global Vigilance, Global Reach, and Global Power" is conceptually timeless; its application must change with the times. To ensure it continues to link our ability to deliver sovereign options for the nation with the means we have available, we must continue to develop it as a strategic framework—and must encompass all three war-fighting domains—in tandem with our new systems, practices, and tactical and operational theories.

Since the days of Kitty Hawk, airpower has been seen too frequently through the lens of its awesome technology: beautiful flying machines streaking effortlessly across the sky; mighty rockets lifting satellites flawlessly into orbit; and persistent electronics sensing, signaling, connecting, transmitting, processing, and controlling integrated, cross-dimensional effects in air, space, and cyberspace. Yet it is our people—Airmen—whose intellect and skills transform mere hunks of metal, buckets of bolts, microprocessors, and circuitry into the nation's war-fighting edge. We must therefore recapitalize not only our inventories of aging aircraft and spacecraft but also our intellectual power. It is, after all, our intellectual capabilities that determine our ability to practice the strategic art and to solve the ends/ways/means/risks challenges we face. And it is our intellectual capabilities that are the foundation of ideas and concepts that American Airmen have used to fashion the Air Force into this nation's asymmetric advantage in war and peace.

Strategic Studies Quarterly will help stimulate these intellectual recapitalization efforts, which will in turn foster Airmen's long-term ability to think strategically. This ability is at least as critical now as it has ever been; war, after all, surrounds us, and it is not getting any easier to wage or understand. I challenge each of you to embark on your own journey of intellectual discovery; to explore what is possible in the application of air, space, and cyber power; and to weigh in with your thoughts in future issues. If what we do today defines the future for our Air Force, our nation, and the

global community, I challenge each of you to have *strategic effect* by educating other Airmen, the American public, and our nation's leaders about the enduring value of air, space, and cyberspace for national security.

We now find ourselves at a historic inflection point—one fraught with strategic challenges. Previous generations of Airmen also faced great challenges, and yet, armed with well-crafted and resourced strategies, they were able to create the strategic effects our nation needed during epic chapters in its history. When he said, "Nations nearly always go into an armed contest with the equipment and methods of a former war. Victory always comes to that country which has made a proper estimate of the equipment and methods that can be used in modern ways," Billy Mitchell established a vision for strategic thinking that Airmen can still follow. Today, it is our responsibility to apply the same level of mental rigor as generations of Airmen have done before so that we meet the challenges that face us with the imagination and creativity our country expects of its Air Force.

As the 18th Chief of Staff of the Air Force, I am honored to lead Warriors—proud members of the profession of arms—those who have answered the nation's call to service and sacrifice. The Air Force is America's cross-domain, global-maneuver force. The power Airmen wield is at once strategic, operational, and tactical. So must be our habit of thought. At this time of war, and at this strategic crossroads, America could ask no more—and expect no less—from its Airmen. SSQ