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Strategy and Air Power

By Thomas Donnelly

More than any of the other armed services, the U.S. Air Force approaches the 2005 Quadrennial Defense Review with a sense of foreboding. Touted just a few years ago as the shining exemplar of the revolution in military affairs and the new American way of war, the Air Force is today under increasing scrutiny from Congress and the Pentagon to justify its procurement priorities in the context of the global war on terror. Neither the Air Force's most fervent detractors nor its most devoted acolytes, however, offer an accurate assessment of the role of air power in the post-9/11 strategic environment. The time is ripe for a more realistic, balanced reappraisal of what air power can—and cannot—be expected to accomplish against present and future threats to U.S. national security.

For more than a decade, the U.S. Air Force has been the darling of the defense policy community. In contrast to the allegedly hide-bound Army, conventional wisdom during the 1990s imagined the Air Force as darting from trouble spot to trouble spot, repeatedly tipping the balance of power in favor of the United States in otherwise unwinnable conflicts. As much as anything else, it was the video-game-like images from the first Gulf War of precision-guided munitions neatly deposited onto Saddam's tanks and palaces that revived America's confidence in its military and began to put the ghosts of Vietnam to rest. And indeed, until very recently, U.S. military power seemed all but synonymous with air power, which offered to leverage America's extraordinary advances in computing and information technologies to create an entirely new way of war. David Halberstam, prompted by the Balkan wars and particularly the Kosovo conflict, captured in amber the sense of excitement that surrounded this intoxicating

new creed shortly before the September 11 attacks:

With the accuracy of modern airpower it was possible to paralyze the modern state by taking out its central nervous system, as if quickly and swiftly injecting it with a temporary poison that stilled its capacity to function both militarily and otherwise as a state. Moreover, it could be done with limited risk on the part of American forces, it caused limited collateral damage given the amount of munitions dropped, and it even caused comparatively limited physical damage, or at the least, the physical damage could be fairly accurately controlled. With this strategy you could harm the people who had started the war, not the poor grunts whose misfortune it was to be soldiering out in the field.¹

Thus, air power promised not merely conventional military supremacy, but war free from the bloody horrors that previously had defined war—war without casualties. It was the perfect “end-of-history” military theory to accompany the broader “end-of-history” ethos that captured

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the minds of foreign policy intellectuals in the wake of the Soviet collapse.

But the promise of air power, its advocates insisted, transcended the strategic pause of the 1990s and the occasional need of the United States during this period to quash the ambitions of tin-pot dictators. When great-power rivalry returned to the world stage sometime in the coming decades, most likely in the form of an ascendant People's Republic of China, the ensuing contest for global mastery would be determined by control of air and space. Thus, supposedly transformational technologies like missile defense and next generation fighter aircraft, initially conceived in the fading twilight of the Cold War, would ultimately prove their strategic worth.

Rather than reenacting the budget wars of the past, what is badly needed now is an honest and balanced appraisal of U.S. air power and its potential contribution to the global war on terror and beyond.

History, alas, is a harsh mistress. The September 11 attacks, the subsequent invasions of Afghanistan and Iraq, and the counterinsurgency campaigns that have increasingly defined the day-to-day reality of the global war on terror have all recast these assumptions about U.S. national security. Rather than the high-tech, target-rich enemy of the future that the Pentagon was gearing to fight, the U.S. military has instead been confronted by fluid, stateless networks of guerrilla fighters, who lack the fixed infrastructure—the “central nervous system,” in Halberstam’s phrasing—that precision-guided munitions are so adept at paralyzing. Furthermore, rather than simply hunting down and picking off al Qaeda terrorists, President George W. Bush has framed the global war on terror as a broader struggle to shape the political conditions of the greater Middle East. Although the Pentagon has been loathe to acknowledge it, such a mission cannot help but prioritize American land forces—which, in the zero-sum world of inter-service rivalries and especially at a time of record budget deficits, has inevitably meant a relative increase in the influence of the Army and Marines and a relative diminution of influence for the other services.

And indeed, the defense budget that the Bush administration recently submitted to Congress for fiscal year 2006 is widely perceived as a bitter pill for the Air Force, principally in its proposed cuts to the planned acquisition of the F-A/22 fighter aircraft. The service has also been criticized in some quarters as of late for failing to realign its procurement priorities to more accurately reflect the realities of the post-9/11 world. Military analyst Ralph Peters, for instance, recently wrote, “Today’s Air Force clings to a fight-the-Soviets (or at least the Chinese) model with greater passion that yesteryear’s Army clung to the horse cavalry.”²

Such charges, which provoke predictable ire among blue-suiters, are in a sense a just reward for the ways in which the Pentagon’s transformation project was manipulated to protect the Air Force’s favorite programs. It was the fighter mafia who turned the “revolution in military affairs” into a reactionary movement and is still fighting a rearguard action through the Quadrennial Defense Review (QDR). And besides, there is no narrative more attractive in Washington than a fall from grace.

Nonetheless, the animating principle of America’s defense strategy must be something more than a sense of inter-service rivalry. Rather than reenacting the budget wars of the past, what is badly needed now is an honest and balanced appraisal of U.S. air power and its potential contribution to the global war on terror and beyond.

Rethinking the Revolution

The revolution in air power over the past several decades has achieved every goal anticipated by its original theorists save one. Upon reflection, it now appears that there have been only a handful of cases where U.S. air power can be said to have “won” a war in the sense of being politically decisive. The atomic bombs dropped on Hiroshima and Nagasaki and the seventy-eight-day air campaign in Kosovo are only partial vindications, as Japan surrendered only after a four-year amphibious campaign rendered the homeland vulnerable to invasion, and the outcome of Kosovo was only barely decisive. The “shock and awe” attacks at the start of Operation Iraqi Freedom are even more indicative of air power’s limitations: they were extremely powerful and made a huge contribution to the ultimate success of the invasion, but as we have seen since, they were also far from decisive.

Perhaps more genuinely revolutionary has been the vastly improved coordination between precise airstrikes—call it “precision power”—and ground maneuver. In Afghanistan, the combination of U.S. Special Forces, Afghan militiamen, and American precision power scattered the Taliban and al Qaeda forces whenever they massed to defend a city or a vital point. Precision power has even changed the face of urban combat in, for example, the Fallujah operations this past fall, as Marines and soldiers maneuvered to fix insurgent forces in place, then, as often as not, relied upon firepower from the air to destroy them.

Before the introduction of precision-guided missiles and bombs, airstrikes were accurate within approximately 500 feet and required high-risk, low-altitude bombing runs; today’s satellite-guided bombs are accurate to within 20 feet and laser-guided bombs to within 10 feet.³ These exponential improvements in accuracy have truly transformed operations in the air and on land. In the invasion of Iraq, fully 64 percent of the bombs dropped were precision guided. Almost certainly the proportion of precision weapons used during the counterinsurgency campaign is even higher.

A related component in the advance in air power has been the revolution in airborne reconnaissance, surveillance, intelligence gathering, and battle management capabilities. From large, specially designed aircraft like the Airborne Warning and Control System (AWACS) and Joint Surveillance and Target Attack Radar System (JSTARS) to the proliferation of various electronic “pods” on tactical aircraft, the ability to find an enemy and target him rapidly and from great distance has grown by leaps and bounds. Perhaps most important is the ability to synthesize data from various platforms and sensors to create a clearer general picture of the battlefield than ever before.

All of these amazing air power capabilities offer important contributions to the military’s current missions in the greater Middle East. Yet, like the rest of the armed services, today’s Air Force essentially remains an improved but smaller version of its Cold War self. To be sure, reductions have been made in the bomber and ballistic missile fleets. But the curious result is a force increasingly dominated by shorter-range aircraft even as the service itself has begun to acknowledge its truly global missions.

To the extent that today’s force is suited to the challenges facing the United States in the greater Middle East, it is in no small measure because the long-term

commitment of the Bush administration to the region has ensured that American air power will have continuing access there. Indeed, since 9/11 the variety and span of facilities used by U.S. aircraft has been quite stunning, ranging from Central Asia to West Africa to Southeast Asia. Given anything near the current level of American access in the future, the value of tactical Air Force in Middle East operations will continue to be far higher than conceived in the 2001 Quadrennial Defense Review.

But if that’s the good news, the bad news is that as these kinds of operations endure—call them air cavalry missions—at such high levels, the legacy fleets of F-15s and F-16s are being ridden into premature old age. The F-15, in fact, operates with flight restrictions because of metal fatigue on its wings and tail. Likewise, the plane perhaps best suited to the job, the venerable A-10, is older still. A number of solutions are possible, from continued production of F-16s to the creation of a fleet of long-loitering unmanned combat aerial vehicles (UCAVs) designed as on-call fire support for ground maneuver forces. One of the measures of the upcoming QDR is how well it addresses this issue.

Indeed, long-loitering UCAVs are promising instruments of counterinsurgency and counterterrorism operations in other respects. As belatedly discovered after the September 11 attacks, they are extremely useful in surreptitiously seeking out, identifying, and eliminating terrorist targets. In November 2002, for instance, a CIA-operated Predator drone roaming the skies over the deserts of Yemen located and destroyed a car carrying six suspected al Qaeda operatives. In addition, the sustainability and expendability of unmanned aerial vehicles makes them ideal platforms for surveillance and force protection of critical infrastructure—a vital mission both in expeditionary operations such as Iraq as well as homeland security back in the United States.

The Other Air Force

Beyond questions about the combat systems of the Air Force, the present challenges posed by Iraq and the global war on terror prompt equally pressing decisions about the service’s support aircraft, most notably its fleets of tanker and cargo aircraft. Previous Pentagon defense reviews have tended to pay less attention to such issues—and so the service finds itself today with an insufficient fleet of C-17 airlifters and an increasingly decrepit fleet of tanker aircraft. Such systems are

essential to far-flung air operations; they put the “global” in U.S. air power.

The initial decision to restrict the C-17 program was made in the early 1990s by then-Defense Secretary Dick Cheney. Primarily a cost-cutting choice, it was nonetheless a reflection of how dimly understood the post-Cold War world was at the time. The problem is that airlift needs—that is, the reality of the operations of the recent past translated through a series of formal Pentagon “mobility studies”—are constantly expanding. Even allowing that some formal airlift requirements may be based on very spurious reasoning about the requirement to move large ground units by air, the need for greater airlift capacity is real.

America’s fleet of C-130 aircraft, the Air Force’s cargo-carrying workhorse, is even older than its C-17s. Recently, General John P. Jumper, the Air Force chief of staff, disclosed to Congress that thirty C-130s will be grounded and fifty-eight more inspected, after cracks were found developing on their wings. The design of the plane is itself a half-century old.

As much if not more than tactical fighters, the global war on terror requires that the Air Force prioritize the revitalization of its cargo fleet. Airlift capability has proven especially relevant in the counterinsurgency operations in Iraq, where guerrilla attacks on the country’s roads have made airborne transport of equipment and supplies a preferable, more secure alternative to ground convoys—a mission that the Air Force, to its credit, has readily embraced. As of late 2004, increased air operations meant that more than 400 trucks and 1,050 drivers were kept off Iraq’s most dangerous roadways—delivering approximately 450 tons of cargo a day.⁴

Equally crucial is the need to address the problem of aerial refueling. Unfortunately, the scandal surrounding the Air Force’s plan to lease rather than purchase new tankers has exacerbated the problem by delaying any solution. Tanker aircraft have become increasingly essential to U.S. military operations; in Operation Iraqi Freedom, tanker aircraft flew more than 6,000 sorties, over a quarter of the total Air Force flights.⁵ With future operational requirements driven by the need for greater range, the need for tankers is equally important, doubling or tripling the combat range of both tactical aircraft and long-range bombers, as well as the range of cargo aircraft.

The current tanker fleet of KC-135 aircraft averages forty-four years of age. Even more than combat aircraft like F-15s and F-16s, these tankers are reaching

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obsolescence and plagued by low readiness rates. The upcoming QDR must address the requirement to accelerate a tanker replacement program even as the various investigations surrounding the collapsed leasing proposal continue.

Planning for the Worst

Looking beyond the immediate challenges posed by Iraq and global counterinsurgency operations, there is a distinct danger in taking for granted the relatively low air-defense threat in which the United States operates today. The increasingly effective marriage of land maneuver forces with precision power rests on the almost unquestioned assumption of U.S. air supremacy. Since the end of the Cold War, the U.S. Air Force has had no serious or sustained contest over any air space on the planet. The Taliban’s air assets were largely a joke. During the invasion of Iraq, the Iraqi Air Force did not fly a single sortie. Through Operation Desert Storm and the no-fly-zone operations of the following decade, the Balkan wars, and Operation Iraqi Freedom, land-based air defenses have had minimal effect on U.S. air operations.

This is unlikely to remain the case in the future. One need only review a brief list of the potential adversaries—Iran, North Korea, Pakistan, China—to recognize that many of America’s possible enemies field forces that would badly strain the current or planned capabilities of the U.S. Air Force.

Consider the possibility of a crisis in the Taiwan Strait. The most immediate challenge in such a scenario, no matter the precise tactics imagined, is how to conquer the tyranny of distance. While the Navy would play

a central role in any East Asian crisis, the United States would also have to rely upon land-based Air Force aircraft. While the B-2 bomber would be a key platform and the Air Force is improving its facilities on Guam to handle B-2 operations and maintain its stealthy systems, the B-2 fleet comprises just sixteen airplanes.⁶ Of course, with tanker support, F-117s, F-15 and F-16 tactical fighter bombers—and in future, hopefully, the F/A-22—could operate from Taiwan, Japan, and South Korea, for example. However, all such airfields are well within range of Chinese retaliatory missile strikes, and allowing U.S. aircraft to operate from these countries would de facto drag them into a conflict with Beijing—a politically uncertain proposition, at best.

A Taiwan Strait, Pakistan, or Iran crisis would also occur in a far more dangerous air-defense environment than the Air Force has faced in recent years in Afghanistan, Iraq, or the Balkans. Moreover, whether there would be sufficient time for a methodical air-defense suppression campaign is unclear; the urgency of responding to a nuclear event or to provocative Chinese actions over the strait militates against excessive caution. Such scenarios make a powerful case for stealthy attack aircraft such as the F/A-22 as well as today's B-2s and F-117s, but none of these is, in and of itself, wholly sufficient. They also make a powerful case for diversifying U.S. basing arrangements in the region.

One way to make the most of the B-2 fleet—now that the production line is closed and cold—is to upgrade the aircraft's electronics systems, particularly the outdated computer architecture. The bomber would also be much more flexible if it carried sensors and other systems to detect unanticipated air-defense radars and adjust its flight path accordingly.⁷ Regardless, the Air Force's plans for its "high-end mix" fleet, especially its capability for long-range strike, need to be more thoroughly scrutinized in the 2005 QDR than in past reviews, particularly in light of these emerging threat scenarios.

Best and Worst of Times

Over the early years of the post-Cold War era and through the initial quadrennial defense reviews, the U.S. Air Force has enjoyed tremendous successes. The revolution in precision strike seemed to validate its air power theories and was rewarded in Pentagon budget wars. This run of fortune continued through the invasion of

Afghanistan and the hopes for a quick "shock and awe" victory over Saddam Hussein. But the long-term realities of the U.S. military engagement in the Middle East have brought the assumptions of air power into question.

The Bush administration has made the political decision to hold the growth of the "baseline" defense budget—that is, not counting spending not directly "billable" to operations in Iraq and Afghanistan—and, out of necessity, to slightly shift resources away from the Air Force and Navy to the Army and Marine Corps.

Thus, for the first time since the end of the Cold War, the Air Force is confronted with hard choices about what it really means by "air power." In answering this question, it is burdened not only with trying to adapt to the current challenges posed by the global war on terror, but also a range of future threat scenarios. In some ways the Army, once the most maligned service for its alleged devotion to old ways, has been able to do the most to unburden itself of Cold War baggage since the September 11 attacks—simply by virtue of the fact that a clear new mission has been thrust upon it in the form of the counterinsurgency operations in the global war on terror. The Air Force, by contrast, faces a much less clear path forward—yet its transformation remains equally vital to U.S. national security interests.

Notes

1. David Halberstam, *War in a Time of Peace* (New York: Scribner, 2001), 50.

2. Ralph Peters, "Saving the U.S. Air Force," *New York Post*, February 11, 2005.

3. Steven Kosiak, "Matching Resources with Requirements: Options for Modernizing the Air Force," Center for Strategic and Budgetary Assessments, Washington, D.C., August 2004: 52.

4. Eric Schmitt, "Cargo Flights Added to Cut Risky Land Trips," *New York Times*, December 15, 2004.

5. U.S. Central Command Air Forces, "Operation Iraqi Freedom—By the Numbers," April 20, 2003: 7–8.

6. The total B-2 fleet is actually twenty-one aircraft, but just sixteen of these are "combat coded"; the remainder are retained for training and other purposes.

7. For a fuller discussion of potential B-2 upgrades, see Barry Watts, "Backgrounder: Moving Forward on Long-Range Strike," Center for Strategic and Budgetary Assessments, Washington, D.C., September 27, 2004: 16–18.