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An Air Force Strategy for the Long Haul

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This monograph discusses the current state of the United States Air Force and how it can better align its institutional identity and force posture to the future security environment. It offers a fiscally-constrained menu of recommendations for how that realignment might be realized over the next twenty years, with a larger force posture in mind. This paper suggests change mechanisms that will foster a break from the incrementalism that has plagued the entire national security establishment since the end of the Cold War. The change of presidential administrations and the Quadrennial Defense Review (QDR) present an opportunity for Air Force leaders to inject fresh, strategic thinking into their planning to better posture their Service for existing and emerging challenges.

Chapter 1 begins with a review of the command, planning, and decision-making structures of the Air Force, and then highlights key operational constructs, especially the very useful Air and Space Expeditionary Force (AEF) concept. Force structure is examined, with emphasis on the handicaps of aging assets, diminished foreign basing, and costly excess domestic base structure. Fiscal constraints, including budget pressure and rising costs of fuel and healthcare, are discussed as serious budgetary and operational constraints that are unlikely to diminish. Above all, two daunting challenges are posed: the urgency of recapitalization and modernization despite severe fiscal constraints; and the crisis of institutional confidence that has affected the Service's internal dynamics and influence.

Chapter 2 examines the future security environment and highlights emerging challenges including the rise of China, the protracted conflict against Islamic extremist groups, and the growing risk of nuclear proliferation. China, in particular, poses a pacing challenge to the Air Force. Not only is the China's military aggressively pursuing anti-access/area denial capabilities, it is also taking steps to deny free use of the global commons, encompassing international airspace, international waters, space, and cyberspace. The effects of China's military buildup are not limited to potential combat scenarios. In fact, the impact on US diplomatic leverage might be more important, as Beijing's buildup weakens two important pillars of Pacific regional security: deterrence and crisis stability. To bolster these pillars, the Air Force urgently needs to improve its strategic reach and force survivability, to include constructing more and harder bases.

The report's most significant finding in measuring current plans against future challenges is that the Air Force is building a "middle-weight" force structure that is much too sophisticated and expensive for relatively low-end or irregular conflicts, while simultaneously lacking needed capabilities and capacities to address challenges at the high-end of the military competition. By way of example, the F-35 Lightning II—by far the Service's most expensive modernization effort—represents a classic "middle" capability that lacks critical performance characteristics (e.g., range) needed to meet high-end challenges, while it is over-specified and overpriced for low-end challenges.

Chapter 3 offers three main prescriptions consistent with the overarching theme of reducing the middle-weight forces and improving Air Force capabilities and capacities at both the low and high ends of the conflict spectrum:

- Reinvigorating and reestablishing the Service as an influential force in the defense policy debate;
- Changing the Service's force structure and platform plans; and
- Adapting the Service's basing plans.

Specifically, the Air Force must overhaul its research and development and acquisition communities to restore the technical expertise and professional excellence lost in the years following the Cold War. A parallel initiative for the Air Force nuclear enterprise seeks to restore the discipline and pride that had been hallmarks of the Strategic Air Command.

Moreover, the Air Force should begin a long-term effort to communicate its ethos and doctrine with other key organizations, to include its sister Services. Advanced education at first-rate institutions of higher learning must become a priority for senior Air Force officers. The Service should also provide more comprehensive officer education on the US national security institutions, starting with their own and the other three Services.

One of the best ways to exert greater influence in joint force management and employment is to develop and advocate compelling ideas. Air Force leaders must begin to develop a set of alternative operational concepts that stake out important perspectives on the entire spectrum of joint military operations, not just ones relating to air and space. Four strong candidate mission areas for conceptual innovation are: high-end, asymmetric warfare; irregular warfare; counter-proliferation; and homeland defense. In each of these areas, the Air Force has an opportunity to take a leading role in innovation and doctrine. In particular, the service should be the pathfinder for institutionalizing long-term Unmanned Aerial Vehicle (UAV) integration.

Tanker modernization must be sustained. The combined risks of tanker fleet systemic failure, shrinking overseas basing options that mandate greater mission endurance, and the growing need for extremely long-range air operations in irregular warfare and opposed high-end warfare present a compelling case for tanker modernization. Toward that end, Air Force should reformulate its KC-X program to address aerial tanking in the most demanding area of operation, the Pacific theater, under the assumption that most air and sea bases inside 2,000 nautical miles of the Asian mainland will be held at risk.

The Next-Generation Bomber, or B-3, is intended to serve as the backbone of the Air Force's long-range bomber force over the long haul. Along with aerial refueling, stealthy intelligence, surveillance and reconnaissance (ISR), and denied-area communications, the B-3 will constitute a critical and indispensible element of America's long-range penetrating surveillance and strike capability for decades to come. Recently, however, Defense Secretary Robert Gates cancelled the program, evidently to refine B-3 requirements, such as whether it should be unmanned. This report makes the case for full-rate production of twelve aircraft per year from 2018 through 2027, progressing through five block upgrades, the last four being unmanned designs in order to turn it into a truly global surveillance-strike asset.

The Air Force should continue to expand and adapt its airborne intelligence, surveillance, and reconnaissance force to meet the needs of existing threats and emerging challenges. Despite its aggressive fielding of Predator UAVs in recent years, the Service must field a more multi-dimensional ISR force able to surveil a variety of mobile targets ranging from individuals to high-end systems in denied areas. It should start by initiating developmental programs for stealthy follow-on systems to the MQ-9 Reaper and the RQ-4 Global Hawk with the goal of fielding a robust, three-tiered stealthy ISR UAV fleet, the third tier consisting of ISR-optimized Block 50 RB-3s for deep, clandestine penetration into high-threat environments.

As with the Air Force's airborne ISR forces, the US military increasingly depends on Air Force satellite systems. The Service must work to accomplish a minimum of five objectives in the space arena: (1) reverse the atrophy in the US space design and industrial base, and its associated manpower base; (2) address the looming deficit in the joint force's ability to transmit critical information to deployed forces in opposed-network environments via long-haul, high bandwidth protected satellite communications (SATCOM); (3) improve protection for all current and planned space assets, even those in geo-stationary orbit (GEO); (4) develop the means to rapidly replenish destroyed or disabled satellites; and (5) tackle the lack of "space reciprocity" in DoD that leads to requirements gold-plating and fractured fiscal incentive structures.

Like the other Services, the Air Force could have been more aggressive in adapting to the demands of long-duration irregular warfare. With the notable exception of the Predator UAV, it operates with a fleet designed for 1980s major combat operations, accomplishing irregular warfare tasks at an unsustainable cost in fuel and accelerated airframe wear. This report advocates that the Air Force consider expanding its irregular war forces to include armed reconnaissance and short-takeoff, light airlift aircraft.

Given the range of future operational challenges outlined in Chapter 2, emerging threats employing anti-access/area-denial (A2/AD) capabilities will likely force an evolution away from massed operations involving short-range, multi-role fighter-bombers. Indeed, at some point over the next two decades, short-range, non-stealthy strike aircraft will likely have lost any meaningful deterrent and operational value as anti-access/area denial systems proliferate. They will also face major limitations in both irregular warfare and operations against nuclear-armed regional adversaries due to the increasing threat to forward air bases and the proliferation of modern air defenses. At the same time, such systems will remain over-designed—and far too expensive to operate—for low-end threats. In short, the so-called "tac-air shortfall" or "fighter gap" is only a problem if one believes that (1) the legacy force fighter-bomber structure replacement is affordable; and (2) its utility will endure in the future security environment. Stealthy air superiority craft—even those with relatively short range, such as the F-22—may retain significant utility over the next twenty years, however, particularly in the near term, given the proliferation of sophisticated Russian air defense systems.

On the other hand, there is a strong case for reducing the total F-35A procurement. The Air Force should consider cutting its planned buy to free up resources for other higher-priority requirements. Reducing the Air Force plan to buy 1,763 F-35As through 2034 by just over half, to 858 F-35As, and increasing the procurement rate to end in 2020 would be a prudent alternative. This would provide 540 combat-coded F-35As on the ramp, or thirty squadrons of F-35s by 2021 in time to allow the Air Force budget to absorb other program ramp-ups like NGB.

Beyond programmatics, much more attention must be given to basing, which has been allowed to atrophy in two ways. First, the Air Force has excess CONUS base capacity for its planned force structure. Another Base Realignment and Closure (BRAC) round in the 2012 timeframe would better enable the Air Force to achieve the recommendations outlined in this report. Second, the emergence of Asia as the new center of geostrategic gravity suggests a draw-down of European bases and an expansion of Asian base *access.* The expanding Chinese long-range strike and ISR capacity will likely place some US forward bases at risk, forcing a pullback from those bases during a crisis. This could overwhelm available capacity at the major US power-projection bases in Alaska, Hawaii, and Guam. Accordingly, just as they did in the Cold War, US strategists must once again rethink the military's forward-basing posture, incorporating the four most important posture considerations: (1) base dispersal (physically and operationally); (2) base hardening; (3) active defenses; and (4) survivable warning systems.

The proposals contained in this report represent an alternative to the current Air Force program that reflects realistic future budget constraints. Their implementation would result in a 2028 Air Force that is better prepared to address both today's threats and the challenges of the future security environment, and that is much more capable of flying and fighting from long range or against irregular foes. Under current Air Force plans, only 6 percent of its 2028 Air Force air arm will consist of long-range surveillance-strike systems. The plan presented here would see that percentage almost triple, to 17 percent of the strike arm, fielding one hundred additional bombers and eighty additional long-range ISR platforms, most of them of low-observable designs.

This plan also provides for a much more stealthy and survivable force across its total range of capabilities. From a force that in 2009 has low-observable or stealthy platforms in only 5 percent of its fighter force, 20 percent of its bomber force, and none of its ISR force, this plan results in a 2028 Air Force with low-observable platforms in 80 percent of its fighter force, over 60 percent of its bomber force, and over 50 percent of its ISR force. Substantial force structure additions in the form of light aircraft and UAVs make this Air Force much more useful and sustainable in protracted, distributed irregular warfare environments.

This plan would also transform the Service's space forces, which are coming under greater threat. The future space force, with better space situation awareness and satellite attack warning, improved passive and active defenses for satellites operating up to geosynchronous orbits, and comprising new operationally responsive tactical replacement satellites, would be far more suited to a future in which opposed space operations seem virtually guaranteed.

In summary, the Air Force needs to undertake a comprehensive, long-term approach to adapting its force posture to meet strategic needs and fiscal realities. By taking bold steps such as those suggested in this report, the Air Force can better align itself with the future security environment, and become a driving force in shaping it as well.