Proclaiming Airpower

Air Force Narratives and American Public Opinion from 1917 to 2014

Alan J. Vick

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14. ABSTRACT

This report examines the evolution and interaction of U.S. Air Force narratives and popular attitudes toward civil and military aviation over the past century ??? from the "golden age" of aviation in the first half of the 20th century, when flight and airpower captured the American public's imagination, to 2014, when aviation had long since become taken for granted. The study first examines the social currency of aviation and airpower, drawing on a historical review, the frequency with which airmen appeared on the cover of Time magazine during the period, and the frequency with which airpower and aviation concepts appeared in books. It then examines Air Force narratives, including the Air Force's origin story as well as the dominant ideas uniting the organization at various points in its history. Finally, drawing on polling data from more than 50 opinion surveys conducted over the past 80 years, the study traces the evolution of the American public's attitudes toward the Air Force since 1935. The American public today does not view airpower or the Air Force with the same fascination and enthusiasm that it did during the "golden age" of aviation, but the report concludes that shortcomings in Air Force narratives are not to blame: Airpower's enormous social currency during the first half of the 20th century was due to real-world events and technological advances, not narratives. However, the report emphasizes that an effective narrative is still important as a means to help the public and key decisionmakers understand the contributions that airpower makes to U.S. national security today, and offers recommendations for the Air Force in this regard.

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Preface

The U.S. Department of Defense is entering a period of fiscal austerity that could last decades, which would be unprecedented in the past 70 years. In addition to its potential duration, the coming age of defense austerity also promises to be unusually challenging for the U.S. Air Force (USAF) because it is following a decade of wartime operational tempo and two decades in which relatively little modernization took place. The combination of high and continuing operational demands with a hiatus in modernization has greatly stressed the USAF as near-term readiness increasingly competes for funds with programs needed to meet future challenges.

To address these and related policy issues, the USAF Quadrennial Defense Review Office (HAF/CVAR) commissioned a RAND Project AIR FORCE Fiscal Year 2014 study. The sponsoring office was particularly interested in help with two problems: (1) measuring the benefits of high readiness levels across the USAF and (2) gaining deeper insights into the relationship between USAF narratives and public attitudes toward the service. To offer empirically based insights on those issues, the RAND study identified four questions for analysis: (1) What has been the historic demand for joint force and USAF responsiveness over the past 60 years? (2) What are the responsiveness demands associated with current U.S. strategy, operational plans, and planning scenarios? (3) What lessons can be learned from the New Look Era, when airpower was widely viewed as the cornerstone of U.S. national security? and (4) How have USAF public narratives and popular attitudes toward airpower evolved over the past century?

This report presents the findings from research directed at the final question. Other forthcoming reports address the other three questions. The research described in this report was conducted within the Strategy and Doctrine Program of RAND Project AIR FORCE.

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Summary

Background

After seeing the advanced state of European military aviation during World War I, American airmen returned home determined to build a modern and capable air force. Stymied by Army leaders who saw aviation as a supporting arm, congressional limitations on spending, and a general pacifist mood, prominent airmen proclaimed[1] airpower to the public via speeches, books, and articles in newspapers and popular magazines. Airmen believed that only through an educated and supportive public could pressure be brought on Congress and the War Department to make the investments and organizational reforms (particularly an independent air arm) necessary for the United States to build an air force on par with Europe's best.

Seeking to ride the exceptional early 20th century wave of public enthusiasm for aviation as well as guide its direction, airmen developed narratives making the case for new air-centric military strategies and organizations. They did this most visibly from the early 1920s to the mid-1950s. By 1960, the public's emotional connection to aviation had largely ended, although airpower still loomed large in its understanding of U.S. military strategy. Although aviation has lost its central place in the American imagination, airmen have continued to seek public support through an evolving narrative centered on the themes of

[1] According to *Webster's*, to proclaim is "to declare publicly, typically insistently, proudly, or defiantly and in either speech or writing." This is an apt description of what airmen have done via public narratives over the history of the USAF and its predecessor organizations. See *Merriam-Webster Dictionary*, online.

advanced technology, airmindedness (a unique perspective on time and space), and innovation. The evolution of this narrative over the past 100 years and its relationship to American popular attitudes toward airpower and the Air Force is the subject of this report.

Research findings and recommendations are presented below.

Findings

The Social Currency of Aviation and Airpower Was Uniquely High During the First Half of the 20th Century

Public opinion toward the Air Force was most favorable when aviation was at the center of popular culture and the public's imagination was captured by "the limitless future of the sky." The fascination with flight was arguably the first mass cultural phenomenon in the United States, enabled by the new media of radio and film. Dramatic rises in the social currency of aviation can be quantified as occurring between 1900 and 1920, well before American airmen began presenting their first public narratives (see Chapter Two). Average people identified with flight and aviators, they routinely discussed aviation matters with friends and family, they avidly sought and shared information about aviation, and many became aviation advocates. In short, aviation had exceptional social currency in the first half of the 20th century; during those years, the public was predisposed to give airpower friendly answers in polls. To be fair, energetic outreach by airmen and airpower advocates nurtured, sustained, and focused public support, but it was publicity about real-world events and concrete accomplishments—improvements in aircraft, world-record flights, and performance in combat—that gave airpower its great social currency, not narratives, however carefully constructed.

USAF Dominance in Public Opinion Surveys Fell as Public Enthusiasm for Aviation Waned

Ironically, as many of the aviation dreams became reality (e.g., safe, reliable, global travel by air), flight lost its mystery, adventure, and glamor. Other dreams became muddled or morphed into nightmares.

In Korea and Vietnam, for example, the public perceived airpower as vital but not decisive. And with the Soviet development of a large nuclear bomber and missile force, the nightmare of nuclear attack on the homeland became a real possibility, never fully removed by the strategy of deterrence. As aviation and airpower drifted away from the center of the public's consciousness or moved in darker directions, popular attitudes toward the USAF became more complex, mixed, and nuanced. There have been spikes of public enthusiasm for airpower since the end of the Cold War, but the consistently high interest that the USAF once could take for granted has long passed. As a consequence, airpower has become routinized; the USAF is highly respected along with the other services but is no longer viewed as revolutionary or particularly newsworthy. Airpower's social currency today is primarily a function of its visibility in ongoing military operations and popular interest in new technologies, such as drones, both of which are largely outside of USAF control.

Shortcomings in Airpower Narratives Are Not to Blame for Changes in Public Opinion Toward the USAF

When airmen come together to discuss the USAF's relative position among the services, its budget share, and its role in national military strategy, a common refrain is that the Air Force fails to "tell its story" in an effective manner. It is typical in such gatherings for earlier airpower narratives to be held up as exemplars of how the USAF should educate the public today. Usually implicit, but at times explicitly articulated, is the belief that if airmen would only proclaim airpower as boldly and unapologetically as General William "Billy" Mitchell that public opinion would follow. There is no evidence in the public opinion data to support the view that the decline in the number of survey respondents choosing the USAF as the "most important branch" can be attributed primarily to narrative failings. Public opinion toward the USAF peaked during the years when its social currency was highest and declined as airpower's social currency waned, not because of changes in narrative. The public perception of the USAF as the dominant service declined in the 1950s even though the narrative did not change. After the 1991 rout of Iraq and multiple successes in the Bal-

kans, airmen presented an updated version of the "Victory Through Air Power" narrative; this was dominant from 1991 to 2003. But the new narrative did not bring polling back up to 1960s levels and was unable to resist the change in social currency brought about by 9/11 and, later, by the Iraqi insurgency. The USAF dropped in the polls in 2002, then plunged in the 2004 poll despite airmen largely holding to the new narrative and well before "We Are Critical Enablers" became the official narrative in 2008. These changes were driven by what the public was observing in these ground-centric conflicts, not by what airmen were saying. This isn't to say that narrative is unimportant, but at most it can capitalize on external conditions when they are favorable and, perhaps, mitigate their effects when they are unfavorable.

The American Public Is Less Inclined to Distinguish Among Service Branches

The most striking and important trend in American public opinion toward the military services is the convergence in views between 1949 and 2014. In 1949, airpower was strongly associated with the Japanese surrender and with the emerging concept of strategic nuclear deterrence. In a July 1949 Gallup poll, there was an 80 percentage point difference between those selecting the Air Force as the "most important service" and those selecting the Army. By 1960, this gap was still large but below 60 percentage points. When Gallup returned to this question in 2001, the gap had dropped to 30 percentage points. It declined steadily in the 2002, 2004, and 2011 polls. By 2014, the gap—now between the Army at top and Navy at bottom—was 9 percentage points, a remarkable change from 1949. This convergence began during the air-centric 1950s and has held constant during the ground-centric 2001–2014 period. In keeping with this convergence, the survey answers are in some cases now falling within the sampling error, suggesting that the public is now divided almost equally in its service preferences.

Recommendations

Explore Means to Increase the Social Currency of Airpower

One possible path to increased social currency would compare civilian technologies that are getting the most buzz in tech circles (as well as the broader public) to USAF research and development programs. The idea would be to identify those USAF programs that are most closely aligned with civilian technologies possessing high social currency and promote them in USAF media channels. This would leverage the greater visibility of civilian technologies in the same way that early airmen capitalized on public interest in flight to advance military aviation. USAF leaders are already emphasizing advanced technology in outreach efforts, including the new "Breaking Barriers: America's Airmen" initiative that teams the USAF with *Wired* and *Scientific American* and offers a website focused on airmen pushing technological and operational frontiers; the research and development/civilian tech comparison would be a complement to such efforts. Another path to increased social currency would rethink how the USAF presents information about its role in ongoing and recent operations. There are significant policy and security constraints on Air Force actions in this area that greatly limit USAF outreach options. Nevertheless, this may be a place where innovative approaches, such as animations, might better convey to the public what is happening or what happened in air operations than traditional reporting and targeting pod videos.

Anchor USAF Narrative in Big Problems of Concern to the American Public

An effective airpower narrative must begin with a problem that matters to the nation. The classic airpower narratives all did this, presenting vexing problems that the public cared deeply about, whether it was avoiding another war in the trenches or preventing World War III. If the public is not interested in the problem as defined in the narrative (perhaps because it is overly narrow or abstract), then it will not be interested in the solution offered by the Air Force. As discussed in Chapter Three, a strong airpower narrative (1) presents a difficult and important problem, (2) offers a big idea that describes how airpower

can solve the problem, (3) has an emphasis on technology and innovation, and (4) ends with an aspirational vision for a better future.

Use Long-Term Public Opinion Trends to Inform the USAF Narrative

Whether simply divided in its preferences or moving toward an "equally important" perspective, the American public is much less inclined to see one service as dominant (see Chapter Four). This is a powerful trend that is unlikely to be reversed anytime soon. However much airmen may wish for a return to earlier times when airpower was viewed by the public as the dominant military instrument, those times are gone. Narratives that are built on an out-of-date understanding of public opinion will fall flat. Given this environment, how should the USAF engage the public? The USAF already articulates its unique contributions within a joint context, so more jointness is not necessarily the answer. Nor is a return to "Victory Through Air Power" likely to work with a divided and more skeptical public. Is there a third way? The current direction of USAF outreach themes emphasizing advanced technologies and innovation offers promise. It avoids the extremes of parochialism and bland jointness and is likely to resonate with a public that strongly associates the USAF with advanced technologies.[2] Narratives that reinforce these themes are ideal because they are deeply rooted in Air Force history and traditions, are consistent with the current USAF vision, are plausible to the public, and offer the hope of breakthroughs that would matter greatly to the nation.

Final Thoughts

Airpower narratives have served multiple and varied purposes over the life of the Air Force. Some have sought to describe the foundations of Air Force culture, others have offered a CEO-style perspective on the structure and purpose of the institution. The best-known (and most controversial) narratives offered to solve a difficult national security problem through the innovative use of aerospace technologies.

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2 See Chapter Four for survey details.

This study sought to understand whether these public narratives drive public opinion. This analysis found that they have less impact than typically believed by airmen and airpower advocates. Rather, the social currency of airpower—affected most powerfully by high-visibility technological advances and ongoing military operations—has more impact on public attitudes toward the USAF.

Given this, does public narrative matter? The answer is an unequivocal yes, for several reasons. First, there are other influence pathways that this analysis did not assess, in particular the impact of public narratives on opinion elites, senior government officials, and elected representatives. Although public narratives appear to have marginal influence on public opinion, they may have much greater sway with these other audiences who are more directly involved in policy, programming, and budgeting decisions. Second, healthy organizations must have a logical, coherent, and inspiring explanation for new personnel acculturation as well as organizational pride and esprit. Nowhere is this more important than in military organizations, where the scale of sacrifice is potentially extreme. Finally, as Samuel P. Huntington noted 60 years ago, every governmental agency in a democracy has a responsibility to present a compelling case explaining why the public should devote scarce resources to funding its mission. What problems is it offering to solve? What unique contributions does it make on behalf of the nation? Aren't there alternative and potentially more efficient ways to accomplish these tasks? Those questions can only be answered through a narrative that links what the institution does to what the nation needs.

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CHAPTER ONE

Introduction

Background

After seeing the advanced state of European military aviation during World War I, American airmen returned home determined to build a modern and capable air force.[1] General William "Billy" Mitchell, in particular, believed that achieving "mastery of the air" against any potential foe was an urgent national security requirement. Stymied by Army leaders who saw aviation as a supporting arm,[2] congressional limitations on spending, and a general pacifist mood, prominent airmen proclaimed[3] airpower to the public via speeches, books, and articles in newspapers and popular magazines. Airmen believed that only through an educated and supportive public could pressure be brought on Congress and the War Department to make the investments and

[1] Although American airmen performed well in World War I, they "flew European-designed aircraft because American products were woefully inadequate for service on the Western Front," and American aviation manufacturers had no capacity to deliver the required number of aircraft. See Herbert A. Johnson, *Wingless Eagle: U.S. Army Aviation Through World War I*, Chapel Hill, N.C.: The University of North Carolina Press, 2001, p. 1.

[2] For more on the internal Army battles over the future of the Army Air Service, see David E. Johnson, *Fast Tanks and Heavy Bombers: Innovation in the U.S. Army, 1917–1945*, Ithaca, N.Y.: Cornell University Press, 1998, especially pp. 40–53; and James P. Tate, *The Army and Its Air Corps: Army Policy Toward Aviation, 1919–1941*, Maxwell AFB, Ala.: Air University Press, 1998.

[3] According to *Webster's*, to proclaim is "to declare publicly, typically insistently, proudly, or defiantly and in either speech or writing." This is an apt description of what airmen have done via public narratives over the history of the USAF and its predecessor organizations. See *Merriam-Webster Dictionary*, online.

organizational reforms (particularly an independent air arm) necessary for the United States to build an air force on par with Europe's best.

Seeking to ride the exceptional early 20th century wave of public enthusiasm for aviation as well as guide its direction, airmen developed narratives making the case for new air-centric military strategies and organizations. They did this most visibly from the early 1920s to the mid-1950s. By 1950, the public's emotional connection to aviation had largely ended, although airpower still loomed large in its understanding of U.S. military strategy.[4] Although aviation lost its central place in the American imagination, airmen have continued to seek public support through an evolving narrative centered on the themes of advanced technology, airmindedness (a unique perspective on time and space), and innovation. The evolution of this narrative over the past 100 years and its relationship to American popular attitudes toward airpower and the Air Force is the subject of this report.

A possible objection to this line of research must be answered up front: Is it appropriate for a military service to have a public narrative? Isn't narrative just public relations and marketing to advance a narrow purpose? Although narrative can have those aspects, it is much more than that. A clear and compelling narrative is both essential to the internal health of a military service and a duty in a democracy. Regarding the first point, Paula Thornhill argues that in a healthy organization members have a clear understanding of their shared purpose, values, and, for government organizations, unique contribution to the public good.[5] On the second point, Samuel Huntington observed that:

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[4] Corn argues that the American romance with aviation lasted from 1910 to 1950. By 1950, the "three key tenets of the winged gospel had lost most of their credibility." The tenets were (1) "the belief that airplanes would be doves of peace," (2) "the belief that aviation would foster freedom and equality," and (3) "that the future would 'see an airplane in every garage.'" Corn notes that "the collapse of the vision of personal wings, in fact, all but crushed the winged gospel as a popular phenomenon." See Joseph J. Corn, *The Winged Gospel: America's Romance with Aviation*, Baltimore, Md.: Johns Hopkins University Press, 2002, pp. 135–137.

[5] Paula G. Thornhill, *"Over Not Through": The Search for a Strong, Unified Culture for America's Airmen*, Santa Monica, Calif.: RAND Corporation, 2012. Simon Sinek makes a related argument that effective leaders inspire members of their organizations by first addressing the fundamental purpose of their organization (the why) before moving to the

> the resources which a service is able to obtain in a democratic society are a function of the public support of that service. The service has the responsibility to develop this necessary support, and it can only do this if it possesses a strategic concept which clearly formulates its relationship to the national security. . . . If a service does not possess a well defined strategic concept, the public and political leaders will be confused as to the role of the service, uncertain as to the necessity of its existence and apathetic or hostile to claims made by the service upon the resources of the society.[6]

Huntington concluded that each service must be able to answer the following question: "What function do you perform that obligates society to assume responsibility for your maintenance?" That question can only be answered through narrative, because it requires the identification of a problem, the description of relevant service capabilities, and an explanation of how those service capabilities solve the problem.

President Harry Truman appears to have shared this view. He awarded the Medal for Merit in 1946 to Alexander de Seversky, who was second only to Billy Mitchell in the stridency and visibility of his airpower advocacy. In the citation accompanying the medal, President Truman lauded de Serversky, who

> as Special Consultant to the Secretary of War, served as advisor on air matters and contributed to the formulation of a sound public opinion through the medium of his writings from September, 1939 to September, 1946. . . . He also devoted himself to presenting to the public an appeal for support of a vigorous air arm which ultimately made an inestimable contribution to the final victory. Mr. de Seversky's aerial knowledge, his singleness of pur-

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how and what. See Simon Sinek, *Start with Why: How Great Leaders Inspire Everyone to Take Action*, New York: Penguin Books, 2011.

[6] Samuel P. Huntington, "National Policy and the Transoceanic Navy," *United States Naval Institute Proceedings*, Vol. 80, No. 5, May 1954.

> pose, and his aggressive presentation of the beliefs he entertained were of great assistance to the successful prosecution of the war.[7]

Although de Seversky's narrative style would win few kudos from more recent presidents, the concept of "strategic communication" is well established in both the U.S. Department of Defense (DoD) and service branch public affairs offices.[8] All the services and their advocates present service narratives in publications, web pages, social media, and speeches.[9]

Proceeding from the proposition that a service public narrative is both necessary and appropriate, the next step is to establish what characteristics make for effective service narratives. A particular problem for modern service narratives is how to avoid two unhelpful extremes. One extreme is to make extravagant claims on behalf of one's service that go beyond facts and denigrate the unique contributions of the other services. At the other extreme, a narrative will fail to meet Huntington's criteria if all it does is pronounce the service branch as a loyal member of the joint team without specifying its unique contributions to national security. Rather, an effective public narrative has to walk a narrow path between service parochialism and bland jointness. This has proven to be much more difficult than it might appear.

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7 Alexander P. de Seversky, *Air Power: Key to Survival*, New York: Simon and Schuster, 1950, full citation reproduced in photo plates between pp. xvi and xvii.

8 See Mari K. Eder, *Leading the Narrative: The Case for Strategic Communication*, Annapolis, Md.: Naval Institute Press, 2011.

9 Service narratives can be found on their websites; in the publications of service associations (*U.S. Naval Institute's Proceedings*, *Army Magazine*, *Air Force Magazine*, and the *Marine Corps Gazette)*; official documents, such as the Air Force's *Global Vigilance, Global Reach, Global Power* (2013), the Navy's *A Cooperative Strategy for 21st Century Seapower* (2007), the *Marine Corps Vision and Strategy 2025* (2008), and the Army's *Strategy for the Environment* (2004); and even in such joint concepts as AirSea Battle and Strategic Landpower. Senior officers also present service narratives in articles such as Lt Gen H. R. McMaster's "Discussing the Continuities of War and the Future of Warfare: The Defense Entrepreneurs Forum," *Small Wars Journal*, October 12, 2014.

The Policy Problem

The USAF policy problem that this paper seeks to address is how to craft a compelling narrative describing the contributions of airpower that is well suited for the conditions of the early 21st century, including the diminished social currency of airpower and aviation (relative to the 20th century), a public that is largely divided in its service loyalties, and a Defense Department that expects service arguments to be framed within a joint context.

Study Methodology

Although drawing heavily on public opinion data, this study is primarily qualitative in method, for two reasons. First, data limitations prevent a statistical analysis of the relationship between narrative (the independent variable) and public opinion (the dependent variable). There are no quantitative metrics to measure narrative variables (e.g., strength, breadth, depth, originality, social currency). Second, public opinion data explicitly measuring public attitudes across services are incomplete, missing for the 1917–1935 period (modern polling began in 1935), sporadic for 1935–1949, and missing entirely for 1960–2000.

For these reasons, this report assesses changes in public opinion from historical and strategic perspectives with an emphasis on social currency of airpower ideas, public narratives, and ongoing military operations.

Purpose of This Document

This report presents a historical and analytical assessment of USAF public narratives over time and their relationship to changes in public opinion toward airpower and the USAF. It is intended to help USAF leaders articulate the contribution of airpower to American national security by offering insights on three topics: the role of social currency as a multiplier or constraint on narratives, the essential components of

a compelling USAF narrative, and long-term trends in American attitudes toward the military services.

Organization

Chapter Two traces changes in the social currency of aviation and airpower from the early 20th century to today. Chapter Three defines narrative, explores the various influence pathways for the USAF public narrative, and looks at examples of how USAF narrators presented the airpower ideas to the public over six narrative periods. Chapter Four describes and assesses changes in American public opinion toward the military services and airpower between 1935 and 2014. Chapter Five presents study conclusions and recommendations.

CHAPTER TWO

The Social Currency of Aviation and Airpower

Introduction

Social currency measures the visibility of a topic within a community or social network. It is defined as the propensity of individuals to find utility in, advocate for, identify with, share news, or seek information about anything, in particular ideas, products, people, events, organizations, and technologies.[1] The idea is primarily used in marketing to capture the real or potential value to a firm of its brand's visibility in social networks. Social currency is key to this analysis of airpower narratives because the level of popular enthusiasm for a topic powerfully multiplies or constrains the impact of public communication.

This chapter explores the rise and fall of aviation and airpower in American popular culture.[2] It begins with a brief qualitative review of

[1] The Vivaldi Partners "Social Currency Wheel" consists of six dimensions: affiliation, conversation, utility, advocacy, information, and identity. VP is a strategy consulting firm best known for its application of social currency to measuring brand visibility in social networks via its annual Social Currency reports. See the Vivaldi Partners website for details. Jonah Berger offers a broader treatment of related concepts in *Contagious: Why Things Catch On*, New York: Simon and Schuster, 2013.

[2] For scholarly treatments of aviation and American popular culture, see Michael Paris, *From the Wright Brothers to Top Gun: Aviation, Nationalism and Popular Cinema*, Manchester, UK: Manchester University Press, 1995; David T. Courtwright, *Sky as Frontier: Adventure, Aviation and Empire*, College Station, Tex.: Texas A&M University Press, 2005; Dominick A. Pisano, ed., *The Airplane in American Culture*, Ann Arbor, Mich.: University of Michigan Press, 2003; Steve Call, *Selling Air Power: Military Aviation and American Popular Culture After World War II*, College Station, Tex.: Texas A&M University, 2009; and Corn, 2002.

popular attitudes toward aviation, then uses two quantitative metrics to measure the visibility of airpower and airmen in the United States between 1920 and 2014.

Aviation and the American Imagination

Aviation historian Richard Hallion observed that "from the dawn of time people around the globe have expressed the dream of flight, emphasizing the incredible and depicting aerial powers as an element of religion, mythology or war."[3] From the Chinese invention of the kite in the second century B.C. and the ninth century A.D. flight experiments by Moorish physician Ibn Firnas (using wings constructed out of bird feathers) to the first manned flight of a balloon in 1783, man sought to make flight a reality.[4] In parallel with these technological advances, writers were exploring the impact of flight on individuals, societies, and cultures. For example, a 1670 treatise by a Jesuit monk described an aerial ship that bombarded towns.[5] By the late 19th and early 20th centuries, European and American elites and publics had become simultaneously excited, inspired, and anxious about the potential for flight. This was reflected in science fiction writings of the time, most notably in Jules Verne's *The Clipper of the Clouds* (1887) and H.G. Wells' *The War in the Air* (1908), both of which ably expressed common hopes and fears regarding flight.[6]

When heavier-than-air flight went from imagination to reality in 1903, expectations—instead of being dampened by the unforgiving

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3 Richard P. Hallion, *Taking Flight: Inventing the Aerial Age from Antiquity Through the First World War*, Oxford, UK: Oxford University Press, 2003, p. 3.

4 Hallion, 2003, pp. 8, 11, and 47.

5 Tami Davis Biddle, *Rhetoric and Reality in Air Warfare: The Evolution of British and American Ideas About Strategic Bombing, 1914–1945*, Princeton, N.J.: Princeton University Press, 2002, p. 12.

6 For more on 19th and early 20th century public attitudes toward aviation, see Michael Paris, "The Rise of Airmen: The Origins of Air Force Elitism, c.1890–1918," *Journal of Contemporary History*, Vol. 28, No. 1, January 1993, pp. 123–141; Paris, 1995; Courtwright, 2004; and Corn, 2002.

realities of crude aircraft—knew no bounds. A "winged gospel" became commonplace, predicting a new air age that would end "humanity's long and frustrating earthbound existence . . . an era not only of free and untrammeled movement for everyone in three dimensions but also of peace and harmony, of culture and humanity."[7] Charles Lindbergh exemplifies the evangelistic zeal of the early airmen: "I devoted my life to planes and engines, to surveying airlines, to preaching, wherever men would listen, the limitless future of the sky."[8]

Robert Wohl describes the inexplicable tug of flight on the human imagination:

> Long dreamt about, enshrined in fable and myth, the miracle of flight, once achieved, opened vistas of further conquests over Nature that excited people's imagination and appeared to guarantee the coming of a New Age. The irony is that in comparison with other technologies, such as electricity, the telephone, the automobile, the cinema or radio, the airplane had little or no immediate or direct impact on the way that most people lived their lives; yet its invention nonetheless inspired an extraordinary outpouring of feeling and gave rise to utopian hopes and gnawing fears.[9]

Similar sentiments are expressed in the second verse of the Air Force official song.

> *Minds of men fashioned a crate of thunder*
> *Sent it high into the blue*
> *Hands of men blasted the world a-sunder*
> *How they lived God only knew!*
> *Souls of men dreaming of skies to conquer*
> *Gave us wings, ever to soar!*

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7 Corn, 2002, p. 31.

8 Charles Lindbergh, *Of Flight and Life*, New York: Scribner, 1948, p. v.

9 Robert Wohl, *A Passion for Wings: Aviation and the Western Imagination, 1908–1918*, New Haven, Conn: Yale University Press, 1994, p. 1. For a treatment of aviation up to 1950, see Robert Wohl, *The Spectacle of Flight: Aviation and the Western Imagination, 1920–1950*, New Haven, Conn: Yale University Press, 2005.

Aviation's place in popular culture was greatly influenced by the coincidental development of moving pictures; the "'golden age' of aviation from the beginning of the 20th century to the 1950s coincides almost exactly with the 'golden age' of cinema."[10] Film offered a visceral medium for telling the aviation story while airmen and aircraft offered filmmakers perfect material for compelling stories:

> The cinema quickly established itself as the most exciting and most popular form of leisure activity yet devised and, in the process, became a remarkably effective channel for the dissemination of ideas, attitudes and the qualities that a society deemed most worth preserving. . . . Initially, films about flying provided the film makers with ideal scenarios for their developing repertoire of trick photography and for exciting or comic stories, but they soon came to reflect the credo of the 'Winged Gospel,' that air transportation would bring about a golden age of progress, that flying was the ultimate technological achievement, and portrayed the airman as a romantic and chivalric figure.[11]

By World War I, aviation was also increasingly the focus of newspapers, magazines, and books.[12] For example, a May 20, 1918, *New York Times* cover story proclaimed "Three Airplanes Downed: Rickenbacker, Peterson and Chambers the Victors in Combat Against Odds."[13] Although the U.S. Army Air Service was inferior to European air forces, American airmen acquitted themselves well in combat and returned heroes. In a conflict characterized by the huge casualties and misery of trench warfare, the war in the air offered the warring nation publics a much-needed respite. Newspapers, moviemakers, and gov-

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10 Paris, 1995, p. 7.

11 Paris, 1995, p. 8.

12 An aviation literary tradition flourished during this golden age as well. See Joseph Corn, ed., *Into the Blue: American Writing on Aviation and Spaceflight*, New York: The Library of America, 2011.

13 Special to *New York Times*, May 20, 1918, p. 1.

ernment propagandists all seized on inspirational stories of individual combat and valor in the skies:[14]

> The traditional images of warfare—dashing cavalry charges, acts of individual heroism, honour and glory—were hard to find in a war of mass death inflicted by high explosive shells, . . . poison gas, or the anonymous bullet. . . . [C]ompared to the horrific conflict on the ground, the war in the air appeared very different. Here, freed from the stalemate of the trenches, fliers pursued each other in the clean air, fought individual duels which could be likened to medieval tournaments and behaved . . . according to a chivalric code which contrasted dramatically with the grim struggle of the ordinary soldier. . . . Some airmen, the successful air fighters, were soon promoted as heroic icons, warriors who embodied the national spirit at war.[15]

The reality in the air as reported by pilots was not quite so heavenly. They experienced ferocious cold at altitude, routinely endured engine oil leaks that covered their faces in oil, and suffered fiery deaths on a regular basis in what Eddie Rickenbacker described as "scientific murder." It didn't matter; the public was smitten by the new air warriors, and the best of them became national heroes.

Already a famous racecar driver, Captain Eddie Rickenbacker returned from World War I as America's most successful fighter pilot; with 26 confirmed kills, he was the "Ace of Aces." Rickenbacker's 1919 book *Fighting the Flying Circus* could be considered a proto-narrative, setting the foundation for more complex airpower narratives to come.

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[14] See, for example, Edwin I. James, "Americans Fight 4,500 Metres in Air: Spectacular Combat Is Won by Campbell and Rickenbacker on Toul Front" and "Americans Check 3 German Attacks," both in *New York Times*, May 20, 1918. (Note: The *New York Times* used international spelling for meters in 1918.)

[15] Paris, 1995, p. 25. The most famous French and German World War I pilots who died in action were given funeral ceremonies well beyond what their rank called for, further evidence of the public fascination with aerial combat. These funerals became media events exploited for both political and propaganda purposes. See Florian Schnurer, "'But in Death He Has Found Victory': The Funeral Ceremonies for the 'Knights of the Sky' During the Great War as Transnational Media Events," *European Review of History*, Vol. 15, No. 6, December 2008, pp. 643–658.

An individual American pilot's account of the war, the book's front cover touted it as "The greatest true air adventure to come out of World War I."[16] Rickenbacker's charisma, courage, and tales of wartime adventure captured the public imagination, and he became the personification of the Army Air Service. "Captain Eddie," as he liked to be called, was neither an airpower theorist nor evangelist, but his book, speeches, and public visibility presented an appealing public narrative of American airmen as skilled, daring, and honorable warrior pilots—as Knights of the Sky.[17] It would be two more years before Billy Mitchell presented a more complete airpower narrative; in the meantime, Rickenbacker's compelling story reinforced highly positive public attitudes toward airmen and sustained the social currency of this new mode of warfare.

Public interest in aviation was sustained in the early postwar years by near-constant news coverage of technology advances and interservice controversies, including the 1918 start of airmail service, the 1921 air-naval tests pitting aircraft (under the command of Billy Mitchell) against a variety of captured German Navy vessels (from submarines to battleships), the first aerial refueling in 1923, and the court-martial of Billy Mitchell in 1925.[18]

A few years later, a single flight became a global cultural phenomenon. When Charles Lindbergh flew solo from New York to Paris in May 1927, he achieved a level of fame and adoration heretofore unheard of, becoming "unquestionably the most famous man in the

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16 From book cover, Eddie V. Rickenbacker, *Fighting the Flying Circus*, New York: Doubleday, 1965 (originally published in 1919).

17 World War I fighter pilots were described as "Knights of the Sky" by February 1918, if not before. See Earl Carroll, "3000 Miles Through the Air: Daring Knights of the Sky Will Fly over Seventeen Cities to Show Value of 'Stunts,'" *Flying*, Vol. 7, No. 1, February 1918, p. 718. "Knights of the Air" is also used to describe World War I airmen. See Ezra Bowen, *Knights of the Air: The Epic of Flight*, Chicago: Time Life Books, 1980.

18 For more on the air-naval tests and the Mitchell court-martial, respectively, see William Mitchell, *Winged Defense: The Development and Possibilities of Modern Air Power: Economic and Military*, Tuscaloosa, Ala.: University of Alabama Press, 2009 (originally published in 1925); and Douglas Waller, *A Question of Loyalty: Gen. Billy Mitchell and the Court-Martial That Gripped the Nation*, New York: HarperCollins Publisher, 2004.

world."[19] Two other aviation firsts occurred in 1929: A U.S. Army Air Corps aircraft set an endurance record of 150 hours (made possible by aerial refueling), and aeronautical engineer and pilot Jimmy Doolittle made the first takeoff, flight, and landing using instruments alone.

The introduction in the United States of the Boeing 247 and DC-3 in the 1930s (which made commercial passenger flights more than a novelty), the 1935 first flight of the B-17 bomber, and Amelia Earhart's attempt to fly around the globe in 1937 are among the aviation events and advances that sustained public interest through the interwar years. Military airmen saw a strong link between military and civil aviation. Billy Mitchell sought to build air bases and airways around the world, believing "that if military airways were set up to pave the way, commercial air expansion would quickly follow with a resultant exchange of passengers, goods and services."[20]

Frank M. Andrews was another airman who made major contributions to the advancement of airpower during the interwar years. Like other air force leaders, Andrews saw the breaking of aviation records and other public demonstrations as a means to both educate and build support for airpower among the public. In that spirit, in 1932 he led a flight of five aircraft from Texas to the Panama Canal Zone, a 2,200-mile journey.[21] Andrews was also an early and leading proponent of the B-17 bomber, a program vital to the evolving concept of daylight, precision bombing. To demonstrate the ability of the B-17 to protect U.S. coasts from enemy navies, Andrews approved an exercise that would have made Billy Mitchell proud had he lived to see it. Mark Clodfelter describes the episode:

> One of [Andrews] most dramatic acts was ordering three B-17s to intercept the Italian luxury liner *Rex*, which doubled as an "enemy aircraft carrier" in a May 1938 exercise, 750 miles in the

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[19] Winston Groom, *The Aviators: Eddie Rickenbacker, James Doolittle, Charles Lindbergh and the Epic Age of Flight*, Washington, D.C.: National Geographic Society, 2013, p. 238.

[20] Henry H. Arnold, *Global Mission*, Blue Ridge Summit, Pa.: TAB Books, 1989, p. 93 (originally published in 1949).

[21] DeWitt S. Copp, *Frank M. Andrews: Marshall's Airman*, Washington, D.C.: Air Force History and Museums Program, 2003, pp. 4–5.

> Atlantic from New York City. Andrews had an NBC radio crew on one of the bombers who broadcast the intercept live to millions of listeners, as well as an ace photographer whose picture of two B-17s flying past the *Rex* at mast-level appeared on page 1 in hundreds of newspapers around the country.[22]

Although these public activities were important, Andrews arguably made his greatest contributions in less visible ways, whether as a junior officer or lieutenant general. Andrews was particularly effective in educating military leaders, congressmen, and publishers on airpower as a military instrument, the intricacies of aircraft manufacturing, and the gap between the more advanced European air forces and the American force. General George C. Marshall, Congressman John J. McSwain of South Carolina (Chairman of the House Armed Services Committee), and *Washington Post* publisher Eugene Meyer were all tutored by Andrews on airpower topics. Indeed, Congressman McSwain flew to Selfridge Field, Michigan, just to meet with Lt Col Andrews on the topic of air force independence. On February 2, 1934, shortly after the visit with Andrews, Congressman McSwain introduced a bill that "embodied everything separate air force proponents were seeking."[23] Whether in Washington or in wartime commands, Andrews was relentless in pushing for an independent air force whose primary mission would be long-range, precision, daylight bombardment of strategic targets. In his final position as Commander, U.S. Forces, European Theater of Operations, he played a central role in the debates over the Combined Bomber Offensive and likely would have commanded the D-Day invasion. Andrews' career was, however, cut short when, on a visit to Iceland in May 1943, his aircraft crashed in bad weather, killing Andrews and most of those aboard.[24]

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[22] Personal communication, January 14, 2015. For more on the event, see Mark Clodfelter, *Beneficial Bombing: The Progressive Foundations of American Air Power, 1971–1945*, Lincoln, Neb.: University of Nebraska Press, 2010, pp. 67–70.

[23] Copp, 2003, p. 7.

[24] Copp, 2003, pp. 24–27.

Even the airmail debacle of 1934—in which undertrained Army pilots replaced civilian contract pilots, resulting in the loss of many aircraft, pilot fatalities, and poor mail service—helped advance the cause by demonstrating the importance of better night and adverse weather training for pilots, the still-crude state of aircraft navigation aids, the need for an aviation weather service, and shortfalls in aviation infrastructure more broadly.[25]

As will be discussed in more detail below, World War II greatly boosted the already high social currency of aviation and airpower, beginning with the effective use of offensive air-ground tactics by the Germans, the Royal Air Force invention of an integrated air defense system (which was central to winning the Battle of Britain), and the brilliant Japanese design and execution of air attacks against U.S. forces in Hawaii and the Philippines. American airmen learned from the early setbacks and quickly mastered the arts of air superiority, carrier warfare, air-naval-ground island hopping, strategic bombing, interdiction, close support, antisubmarine warfare, air transportation, and air rescue. With tens of thousands of aircraft contributing in every conceivable role, airpower became ubiquitous and central to American military strategy. Senior airmen became household names, and at the end of the war airpower was widely credited as the decisive factor in the victory over Japan.[26]

The USAF became a separate service in 1947. Its first decade of independence was marked by continued technological advances, most

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[25] See Groom, 2013, for more details on the airmail service. A good history of the role of airmen during President Roosevelt's first two terms is Jeffrey S. Underwood, *The Wings of Democracy: The Influence of Air Power on the Roosevelt Administration: 1933–1941*, College Station, Tex.: Texas A&M Press, 1991. Underwood's chapter "Early Attempts to Influence Public Opinion" is particularly pertinent to this discussion.

[26] The issue of whether strategic bombing generally, or the nuclear attacks on Hiroshima and Nagasaki specifically, were decisive remains controversial to this day. Some of the key works challenging the decisiveness argument and/or exploring the roots of the early postwar consensus are Robert Pape, "Why Japan Surrendered," *International Security*, Vol. 18, No. 2, Fall 1993, pp. 154–201; Robert Pape, *Bombing to Win: Air Power and Coercion in War*, Ithaca, N.Y.: Cornell University Press, 1996; Gian P. Gentile, *How Effective Is Strategic Bombing? Lessons Learned from World War II to Kosovo*, New York: New York University Press, 2001; and Biddle, 2002.

notably the introduction of jet fighters and bombers into the force; the first supersonic flight, by USAF Major Chuck Yeager; development of photo reconnaissance satellites; and the Atlas Rocket, the nation's first intercontinental ballistic missile (ICBM)[27] as well as a central component of U.S. national military strategy as the nuclear deterrent force. The USAF was viewed as the most important branch of the military during the 1950s and early 1960s, but the social currency of aviation had peaked by then, and darker themes were beginning to emerge even as the USAF enjoyed great prestige.

The atomic bombings of Hiroshima and Nagasaki gave pause to many civilian and military observers, reigniting turn-of-the-century anxieties associated with aviation's potential as a destructive force. More will be said on this in Chapter Three; for now, consider Charles Lindbergh's observations in his 1948 book *Of Flight and Life*. After spending his life devoted to advancing aviation technologies, Lindbergh became convinced that technology was now run amok:

> We are in the grip of scientific materialism, caught in a vicious cycle where our security today seems to depend on regimentation and weapons which will ruin us tomorrow. I believe the values we are creating and the standards we are now following will lead to the end of our civilization, and that if we do not control our science by a higher moral force, it will destroy us with its materialistic values, its rocket aircraft, and its atom bombs—as it has already destroyed large parts of Europe.[28]

Lindbergh was a complex and controversial figure whose philosophical views were far from mainstream, but when he turned to more specific observations on the risks of nuclear war, his writings were quite similar to those of such USAF stalwarts as Hap Arnold and Hoyt

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[27] For a short history of the Air Force's role in the first satellite reconnaissance programs, see Curtis Peebles, *High Frontier: The United States Air Force and the Military Space Program*, Washington, D.C.: Air Force History and Museums Program, 1997, pp. 1–13. For a history of the early USAF ballistic missile program, see Jacob Neufeld, *The Development of Ballistic Missiles in the United States Air Force, 1945–1960*, Washington, D.C.: Office of Air Force History, 1990.

[28] Lindbergh, 1948, pp. vi–vii.

Vandenberg. They differed greatly, however, in their proposed solutions. Arnold and Vandenberg saw the solution in a ready deterrent posture; Lindbergh in disarmament. Writing a few years after the end of World War II, Lindbergh felt that he was reliving the 1930s, watching two implacable foes preparing ideologically and militarily for a war that would destroy civilization:

> The devastation that could be wrought by an Atomic Age war is too appalling to be fully realized. The vision stuns our imagination. But if present trends continue, it is only a question of time before such a war will come. . . . We know that Russia is arming, that she is exerting every effort to gain our knowledge of atomic energy and to build atomic bombs. . . . If the present armament race continues, it is only a question of time before Russia and the United States have assembled weapons with which they can destroy each other.[29]

Along with nuclear weapons, guided missiles such as the German V-1 and V-2 weapons raised the prospect that air warfare might expand into space and, more troubling for the USAF, that manned aircraft might be less decisive than these new weapons. General Hap Arnold had no such concerns, seeing the USAF's future in the continued pushing of technological and operational frontiers. Writing in November 1945, Arnold claimed that a spaceship could be built in the near future. It is telling that the same year that the RAND Corporation (the brainchild of Arnold and Douglas Aircraft engineer Frank Collbohm) was founded, it produced a report proposing a "world-circling spaceship."[30] Yet, despite the efforts by Arnold and others in the USAF to develop ballistic missiles, the institutional air force was more comfortable with airbreathing "pilotless aircraft" as proposed by Theodore von Karman and initially lagged behind the Army and Navy in ballistic missile

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[29] Lindbergh, 1948, pp. 30–32.

[30] Peebles, 1997, p. 1. For more on the RAND study, see David N. Spires, *Beyond Horizons: A Half Century of Air Force Space Leadership*, Maxwell AFB, Ala.: Air University Press, 2002, pp. 14–16; and Francis Clauser et al., *Preliminary Design of an Experimental World-Circling Spaceship*, Santa Monica, Calif.: RAND Corporation, 1946.

research.[31] "Pardoxically, as the Air Force's commitment to develop an ICBM diminished, its determination to be designated sole authority responsible for long-range missiles increased"[32] because space was viewed by airmen as theirs by right, a natural extension of the air domain. In 1958, General Thomas White, the USAF Chief of Staff, codified this view when he introduced the concept of aerospace, ". . . a new construct that depicted air and space as a seamless continuum stretching from the earth's surface to infinity."[33] Although airmen were quick to incorporate space into their concepts and institutional claims and develop critical capabilities, such as ICBMs and reconnaissance satellites, space did not play a central role in any of the USAF public narratives. It was seen simply as an extension of the vertical dimension.[34]

The Soviet launch of Sputnik in 1957 spurred a serious "race for space" between the United States and the Soviet Union as both nations sought the military advantages that rocket technologies (particularly ICBMs armed with nuclear warheads), space reconnaissance, and, perhaps, manned orbiting weapons platforms might provide. Of equal significance from the perspective of social currency, the two nations embraced the race to the moon as a competition that would demonstrate which system of government was superior.

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31 Spires, 2002, pp. 16–21.

32 Spires, 2002, p. 19. See also Benjamin S. Lambeth, *Mastering the Ultimate High Ground: Next Steps in the Military Uses of Space*, Santa Monica, Calif.: RAND Corporation, MR-1649-AF, 2003.

33 Lambeth, 2003, p. 37.

34 The "seamless continuum" argument was deeply flawed but has been a recurring theme in USAF statements on air and space power. It is based on a misunderstanding of the operational environment between the highest altitudes, where aircraft can be controlled using aerodynamic forces and propelled by air-breathing engines (just under 30 miles altitude), and the lowest altitudes, at which Kepler's laws of orbital mechanics apply (a bit over 90 miles is the lowest perigee for a satellite). Smith notes that "the transverse region forms an invisible barrier 65 miles wide that divides air operations from space operations." Any vehicle flying above ~30 miles and below ~90 miles must be powered solely by ballistic means, having neither the advantage of aerodynamic lift nor orbital mechanics to sustain its altitude. See M. V. Smith, *Ten Propositions Regarding Spacepower*, thesis, School of Advanced Air Power Studies, Air University, Maxwell Air Force Base (AFB), Ala., June 2001, p. 44; and Lambeth, 2003, Chapter Three.

In the early years of the space program, it seemed that the golden age of aviation might be followed by a new aerospace age in which winged vehicles would take off from airports like planes, then use rockets to reach orbital velocities. Such craft might travel to the moon and beyond. Orbital stations, moon bases, and routine space travel seemed within reach.[35] Joseph Corn argues that a "gospel of space flight" developed, but that the "differences in the two gospels are more striking than the similarities," particularly the role of space as a battlefront in the Cold War.[36]

If these dreams had been realized, the social currency of aerospace might have been sustained for several more decades, providing a foundation for continued USAF dominance in public opinion surveys. At least so far, no such golden age of space has occurred. There are several reasons why. Foremost is the fact that space travel has remained an extremely costly, technically difficult, and dangerous endeavor that has relegated most space activities to remotely controlled machines. Although this may be changing with the advent of Space X and Virgin Galactic, space has remained the preserve of wealthy nations and, to date, required vast governmental and industrial enterprises to build systems to the standards required for the extreme demands of space launch and travel. Space shuttle proponents were convinced that it would become a "space truck" able to take and return payloads to orbit more cheaply every year, but neither the shuttle nor or other approaches have managed to reduce the cost of putting payloads in orbit. As a result of these painful realities, it became apparent relatively early in the space age that individuals could have little hope of actually flying in space and no hope of owning a spacecraft—in stark contrast to the golden age of aviation, when flying in an airplane and even owning an aircraft were realistic prospects for many Americans.[37] Finally, the high visibility of NASA as the organization responsible for manned space travel, combined with the sensitive nature of military space mis-

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[35] See Howard E. McCurdy, *Space and the American Imagination*, Baltimore, Md.: Johns Hopkins University Press, 2011.

[36] Corn, 2002, p. 142–143.

[37] See Corn, 2002, pp. 142–152, for more on why the "gospel of space" had limited appeal.

sions, has offered the public relatively few opportunities to associate the USAF with space.[38]

Looking back at the years from 1915 to 1960, several themes stand out. The rapid leaps in aviation technology, its wide penetration into civil and military affairs, its central role in World War II, its association with nuclear weapons, the mystique surrounding pilots, and the belief that eventually everyone would have a personal aircraft gave aviation exceptional social currency in American popular culture. This currency made the general public uniquely receptive to airpower narratives during those years. Steve Call rightly observes that airpower narratives took advantage of this social currency; they did not cause it:

> Air power advocates did not create the fascination with air power in popular imagination; rather, public fascination with the flying machine and the reveries inspired by aviation helped to create and sustain exaggerated expectations for air power in the minds of both its proponents and the U.S. public. What air power advocates did do was to appeal to the public's fascination with aviation and air power in an effort to nurture the public's expectations for air power and guide those expectations in directions envisioned by the air power advocates themselves.[39]

Even before Sputnik terrified Washington and average citizens with the prospect of Soviet missiles overflying the United States, public enthusiasm for aviation and airpower had begun to wane as popular culture began to explore darker themes in the airpower story. Steve Call, in his book *Selling Air Power*, offers a detailed account of how the treatment of airpower in periodicals and, in particular, novels and movies such as *On the Beach*, *The War Lover*, *Fail Safe*, and *Dr. Stran-*

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[38] The USAF role in space returned to the forefront after Operation Desert Storm. That conflict greatly increased the visibility of space-based operations in conventional warfighting and led to a debate among airmen on the relative roles of air and space operations. Gen Ronald Fogleman, then Air Force Chief of Staff, went so far as to state that "We are now transitioning from an *air* force into an *air and space* force on an evolutionary path to a *space and air* force." See Ronald R. Fogleman and Sheila E. Widnall, *Global Engagement: A Vision of the 21st Century Air Force*, 1996.

[39] Call, 2009, p. 3.

gelove changed in this time period.[40] Call notes that "by the mid-1950s . . . doubts emerged in the popular culture depiction of air power," and by the end of the decade the image of "air power as a force possessing unlimited potential" was replaced by one that "more and more depicted air power as a malevolent threat. Increasingly air power's image as the best deterrent to war had to compete with images of the Mad Bomber best reflected in *Dr. Strangelove*'s Generals Jack D. Ripper and Buck Turgidson, both of whom threatened to plunge the world into a nuclear holocaust."[41]

> For whatever reason, people began to lose faith in air power, and one reflection of this is the publication, and increasing popularity, of works in popular culture that questioned or attacked the dominant image of air power. Starting in the second half of the fifties and accelerating through the early sixties, novels and movies escalated their attacks and drew ever-larger audiences. . . . These works not only reflect the loss of faith in air power, they undoubtedly accelerated it as well. . . . By 1963 works that unquestionably lauded air power were becoming rare.[42]

The change in popular attitudes is readily seen when comparing *Time* and *Life* magazine covers from the 1940s, 1950s, and 1960s. Between 1942 and 1949, USAF wartime leaders Jimmy Doolittle, George Kenney, Hap Arnold, and Carl Spaatz were prominent on *Time*, *Life*, *Colliers*, and *Look* covers. By 1949, test pilot Chuck Yeager had made the *Time* cover, signaling the transition from wartime emphases to the 1950s focus on air and space power pushing technological frontiers. Airpower was much less prominent on magazine covers in the 1960s, and the coverage was much darker. The May 1960 *Time* displayed a photo of Gary Powers, the U-2 pilot shot down over the Soviet Union. Less than a year later, when two USAF RB-47 pilots

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[40] Which isn't to say that all films in this time period embraced a darker view. *Strategic Air Command* (1955) and *Gathering of Eagles* (1963) presented more traditional and positive themes. See Call, 2009, Chapters Five and Six.

[41] Call, 2009, pp. 9–10.

[42] Call, 2009, p. 135.

shot down over the Soviet Union were released, they also made the cover. The Cuban Missile Crisis made the cover of *Life* in November 1962, although Navy aircraft (and ships) were shown, not those of the Air Force. *Time's* April 1965 cover was an exception, featuring USAF Lieutenant Colonel Robinson Risner in his flight suit and helmet with an aircraft soaring overhead in a more traditional and uplifting image.[43] *Life*'s October 1967 cover presented an Orwellian image of a naval aviator in a North Vietnamese prison cell. Finally, the October 1968 *Time* cover showed presidential candidate George Wallace and vice presidential candidate Curtis LeMay in unflattering caricature, with LeMay in uniform, holding a large model of a B-52.

The trends in attitudes toward airpower were, of course, part of larger societal changes that convulsed the country during the 1960s and early 1970s, undermining public support for the military as an institution. Although the military rebounded from those years, aviation and airpower did not regain the prominence they enjoyed during the "golden years."

Today, flying is largely taken for granted. As will be seen below, the social currency of aviation peaked somewhere between 1945 and 1960. Commercial aviation—which has achieved impressively high levels of passenger volume, safety, and reliability—ironically generates little buzz or enthusiasm among flyers. The general public is more likely to complain about a late flight or the hassles of air travel than to wax poetic about the latest aviation advance. The one area where there is significant public interest is in hobbyist and commercial drones. The FAA, however, has been slow to approve their use, due to concerns about potential collisions with commercial airliners. In short, the "sky as frontier" era of adventure and romance has long since been replaced by the highly routinized, regulated, and domesticated modern air transportation system.[44]

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[43] This was five months before Risner was shot down and taken prisoner in North Vietnam. He remained a prisoner for over seven years and received the Air Force Cross for courage and leadership while a prisoner of war.

[44] Courtwright, 2005.

Military aviation, although inherently nonroutine and dangerous, has fared little better, at least in part because U.S. aerial dominance has been so complete in conflicts since 1990 that there is little suspense in the public mind about the outcome. The American public admires the professionalism and competence of airmen, but airpower is no longer the topic of dinner table conversations, nor is it trending on social media. It is true that new capabilities, such as the stealth, precision, and lethality demonstrated by the USAF in Operation Desert Storm (1991), can create momentary buzz, but there is not the level of sustained public interest in aviation technologies that airmen in the mid-20th century could take for granted. At best, the social currency of airpower experiences periodic short-lived pulses during air-power-centric military operations.

Future advances, especially personal flight technologies, may change that, but there is nothing on the near-term horizon likely to fundamentally alter this assessment. Furthermore, within the modern Defense Department any truly revolutionary technological advance will most likely be placed in a joint command. In this environment, a jaw-dropping air or space power innovation would bring prestige and increased social currency to the USAF, but it would not create the kind of institutional power that the Strategic Air Command enjoyed in the 1950s, a period when the USAF had a monopoly on long-range nuclear weapons, a central place in U.S. national security strategy, and the budget to show for it.

It also is the case that aviation grew up in a period of technological utopianism in which "the machine became not only the symbol of social change but, in the eyes of many, the primary agent of change."[45] This was a far cry from today's more jaundiced (or perhaps more balanced) attitude toward technology. For example, one technology that has fairly high social currency is the unmanned aerial vehicle, or, more popularly, drone, epitomized by the USAF armed Predator unmanned aerial vehicle but increasingly also by the small quad drone, which technologists predict will either be delivering mail-order goods to your front door or spying through your window, perhaps both. The drone

[45] Corn, 2002, p. 47.

is viewed as an important U.S. innovation but also as something menacing. The public strongly supports U.S. counterterrorism operations, including drone strikes, but there is also an underlying unease about targeted killings from the sky[46] and a fear that drones are a threat to individual privacy. This can be seen in public resistance to law enforcement use of drones and fears that the NSA or other intelligence organizations might use them domestically to spy on Americans.[47] This public ambivalence is displayed in a 2013 *Time* magazine cover that superimposed an armed Predator unmanned aerial vehicle over an American suburban home. The cover caption read "Rise of Drones. They are America's global fighting machines. What happens when they're unleashed at home?"[48] To the extent that the USAF is associated with drones, it is at best a mixed blessing.

These fundamental changes in the social currency of aviation have profound implications for our understanding of how airpower narratives and public opinion about the USAF have evolved over the past 100 years. In short, the success or failure of USAF public narratives must be considered within the context of contemporary social currency (including ongoing military operations).

Quantitative Measures of Social Currency

This section considers two measures of the social currency of airpower and the USAF as an institution: (1) the frequency with which airmen appear on the cover of *Time* magazine and (2) the frequency with which airpower and aviation concepts appeared in books.

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[46] This has spawned a whole literature on moral, ethical, and legal aspects of unmanned military operations. See, for example, Bradley Jay Strawser, *Killing by Remote Control: The Ethics of an Unmanned Military*, Oxford, UK: Oxford University Press, 2013; and Daniel Brunstetter and Megan Braun, "The Implications of Drones on the Just War Tradition," *Ethics and International Affairs*, Vol. 25, No. 3, 2011, pp. 337–358.

[47] See, for example, "Law Enforcement Blindsided by Public 'Panic' over Drone Privacy," *U.S. News & World Report*, March 21, 2013.

[48] *Time*, February 11, 2013.

Airmen on the Cover of *Time* Magazine

A striking measure of the social currency of military aviation during the first half of the 20th century is the appearance of airmen on the cover of the national magazine *Time*.[49] Major General Mason Patrick, the Chief of the U.S. Army Air Service, was the first, appearing in 1923. Army Air Corps reserve pilot Charles Lindbergh was chosen as *Time*'s first "Man of the Year" in 1928 for his historic solo New York–to-Paris flight in 1927. Figure 2.1 illustrates the growth and decline of airmen as the subjects of *Time* covers. Note that almost 70 percent of the cover appearances are between 1940 and 1959. Only a single airman has appeared in the 21st century, and the associated story wasn't airpower-related. General Michael Hayden, then director of the CIA, appeared on the cover of *Time* in 2006 as part of a story about domestic spying in the United States. This metric doesn't track perfectly with the "golden age" timeline but does support the view that interest in aviation peaked in the 1940s and 50s. It also should be noted that the relevance of print magazines has plummeted in recent decades as the Internet and television have become the primary media outlets for news. That said, the peak decades for airmen appearances on *Time* covers were the 1940s and 1950s. Airpower currency, as measured by this metric, fell to low levels in the 60s, 70s, and 80s—long before the decline of print media.

Aviation and Airpower Concepts in Books, 1920–2008

Google's Ngram Viewer website offers a powerful tool to track cultural trends over long periods.[50] Ngram uses Google's digital database

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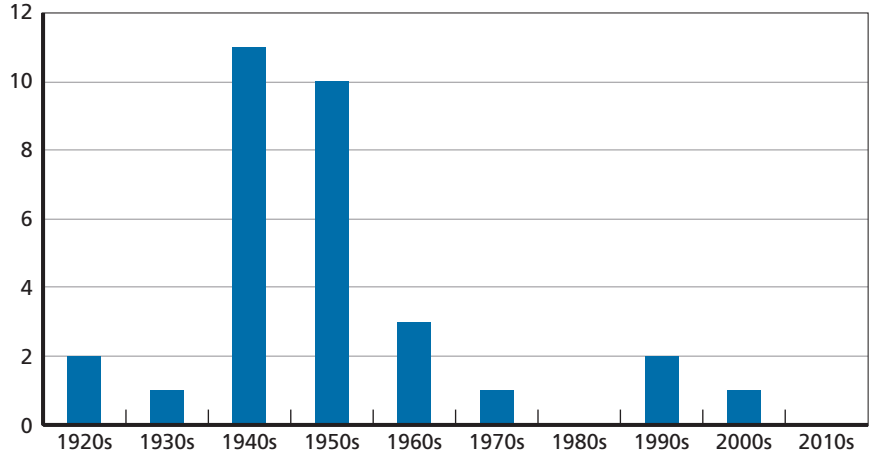
[49] Airmen appeared on the covers of other national magazines as well, including *Life*, *Look*, and *Colliers*. Aviation advances and concepts also made appearances as in the December 1, 1941, *Life* magazine cover photo of a B-17 with the caption "Air Power." Note that USAF officers who appeared on the cover of *Time* as NASA astronauts are not included in this count because their service affiliation was not denoted. The USAF astronauts were Gordon Cooper (May 24, 1963); Gus Grissom and Ed White (February 3, 1967); William Anders and Frank Borman (January 3, 1969); Fred Haise and Jack Swigert (April 27, 1970); and David Scott, James Irwin, and Alfred Worden (August 9, 1971).

[50] Google Books Ngram Viewer displays the frequency with which words or word groups appear in books as a percentage of all similar word groupings. It uses a database of 5.2 million books selected for the quality of the metadata and scanned text from a larger database of 15 million books. All were published between 1600 and 2008. Users can select from 22

Figure 2.1
Airmen on *Time* Magazine Covers, 1923–2014



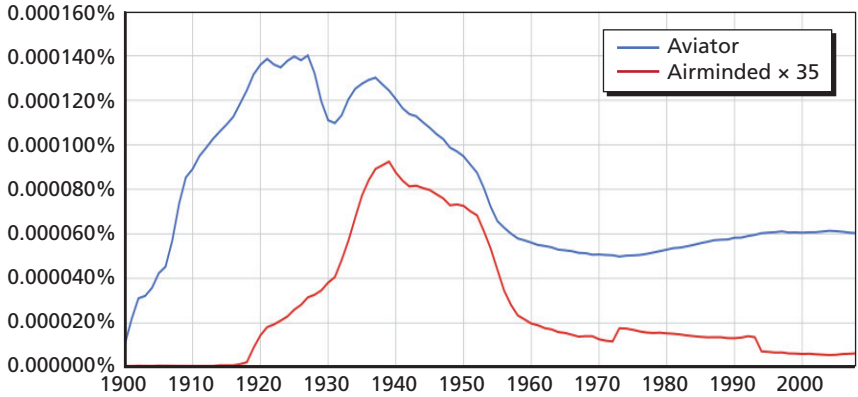
SOURCE: RAND.
RAND *RR1044-2.1*

of more than 5 million books to measure the frequency with which selected words or phrases appear over time. For this analysis, we used the corpus "American English 2012," which includes English-language books (fiction and nonfiction) published in the United States between 1800 and 2008.

Figure 2.2 explores whether terms associated with aviation's "golden age" coincide with the 1910/1920 start and 1950s end that most historians use to bound the period. Two terms are plotted that are often found in early aviation writings: *aviator* and *airminded*. Curves are smoothed to minimize the effect of annual variations, and the less commonly found *airminded* is multiplied so that the curves can be compared. The *aviator* plot supports those historians who argue that

different language-based databases. The database is normalized to account for annual variations in total books published. Plots display years in which 40 or more books contained the search word or word grouping. For more on Google Ngram, see Jean-Baptiste Michel et al., "Quantitative Analysis of Culture Using Millions of Digitized Books," *Science*, Vol. 331, No. 6014, January 14, 2011, pp. 176–182. Also see the user guide at the Ngram Viewer website.

Figure 2.2
Google Ngram Viewer Plot: *Aviator* and *Airminded*, 1900–2008



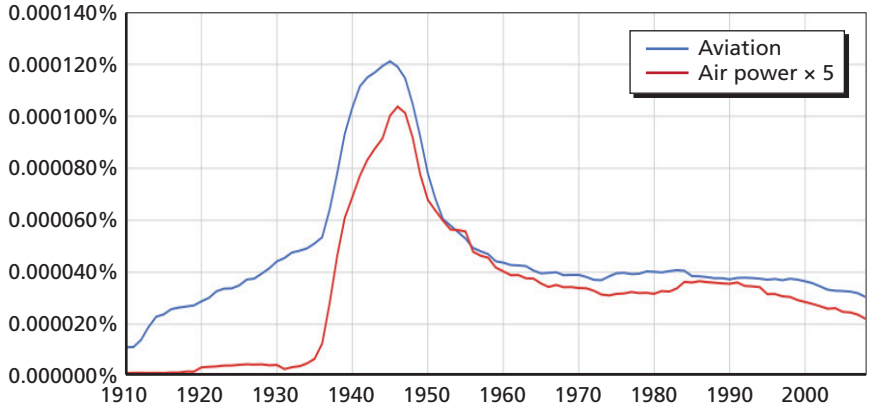
SOURCE: Google Books Ngram Viewer, website, 2015.
NOTE: *Airminded* frequency is multiplied by 35 to allow comparison of curve shapes. Data smoothing value = 10.
RAND *RR1044-2.2*

the golden age began no later than 1910, showing a steep increase in the use of that term even before that date. The *airminded* plot is consistent with the argument that the golden age began closer to 1920; use of the term increased greatly between 1920 and 1940. Historians are generally agreed that the golden age ended by the early to mid-1950s; both plots are consistent with that view. If one denotes the end of the golden age by the date that appearances of these terms began to drop in books, the end would be roughly 1940. If, alternatively, one measures the end by the date that appearances of these terms stabilized, the date would be closer to 1960, consistent with Steve Call's assessment that the era ended in the late 1950s.[51] In either event, the rise and fall of these terms suggests that pilots and the new "airminded" perspective had high social currency from 1910 to 1950.

Figure 2.3 presents evidence in support of the argument that the air force benefited from the broader societal interest and enthusiasm for aviation in general. The figure plots two terms: *aviation* (in blue)

[51] See Call, 2009, p. 133.

Figure 2.3
Google Ngram Viewer Plot: *Aviation* and *Air Power*, 1910–2008

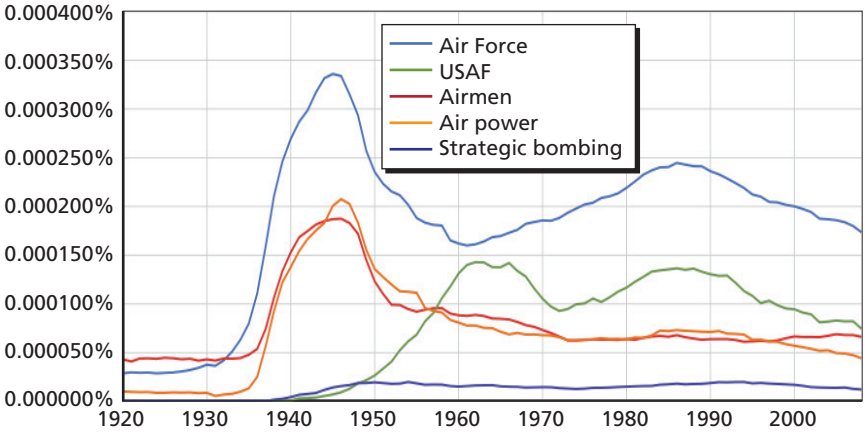


SOURCE: Google Books Ngram Viewer, 2015.
NOTE: *Air power* frequency is multiplied by 5 to allow comparison of curve shapes. Data smoothing value = 5.
RAND *RR1044-2.3*

and *air power* (in red). *Aviation* appeared in books roughly 20 times more frequently than *air power* between 1910 and 1939 and roughly five times more frequently between 1940 and 2008. To allow for a better comparison of the trends for these terms, the Ngram Viewer's multiplier function was used. In this case, *air power* was multiplied by a factor of 5. As the reader can see, the two terms rose and fell in social currency in a nearly identical fashion from 1940 to 2008. Since *aviation* was in use prior to *air power* and other air force–related terms and was used five to 20 times more frequently, it seems reasonable to conclude that public attitudes toward the air force rode the wave of enthusiasm for aviation more broadly, not the other way around. This also is the conclusion of the major historical works (e.g., Corn's *The Winged Gospel*); flight in the broadest sense is what the public was most excited about.

Figure 2.4 displays the results for five USAF-related terms: *air force*, *airmen*, *USAF*, *air power*, and *strategic bombing*. No multipliers were used in the display. The most frequent term was *air force*, which of course can refer to any country's air force, not just the USAF. *Air force*,

Figure 2.4
Google Ngram Viewer Plot: *Air Force*, *Airmen*, *USAF*, *Air Power*, and *Strategic Bombing*, 1920–2008



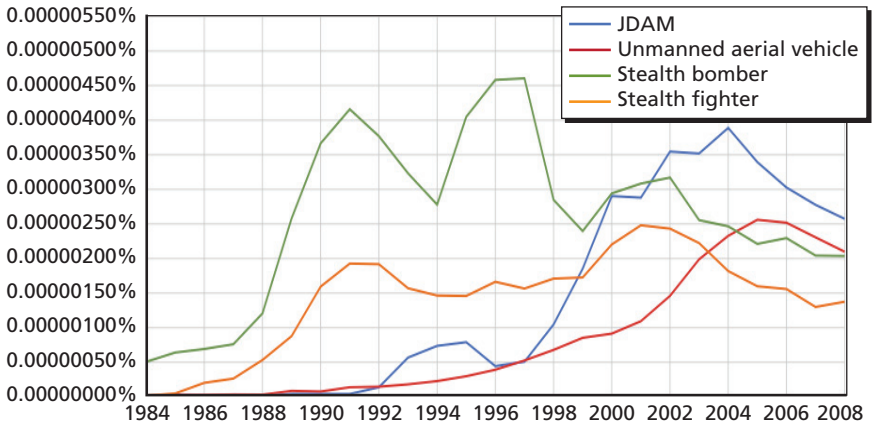
SOURCE: Google Books Ngram Viewer, 2015.
NOTE: Data smoothing value = 5.
RAND *RR1044-2.4*

air power, and *airmen* all followed similar patterns of growth, peaking in 1943, then entering a steep decline. *USAF* was not used until the creation of the independent USAF in 1947, but became common from that point on. From 1960 to 2008, *airmen* and *air power* appeared with similar frequency, but for most of the period less commonly than USAF. *Strategic bombing* was found least often. For the terms whose use dates back to the 1930s (*air force*, *airmen*, *air power*), by 2008 they appeared in books at roughly the same rate they did in the 1930s.

Although airpower experienced extreme changes in social currency during the 20th century, lesser changes are common across all cultural phenomena. That is, most topics experience periods of growth and decline in interest. New technologies, in particular, appear to share similar "buzz curves," with a steep increase in interest initially followed by a plateau then a drop to a new, lower plateau. This analysis plotted Ngram curves for roughly four dozen USAF-related technologies and

airpower ideas.[52] Four of these are shown below. Figure 2.5 displays the rise and fall of interest in four contemporary USAF technologies: Joint Direct Attack Munition (JDAM), unmanned aerial vehicles, stealth bombers, and stealth fighters.[53] Stealth bombers reached peak interest first, since the F-117 (often referred to as a bomber) and B-2 preceded the other technologies. *Stealth fighter* appeared in books during the

Figure 2.5
Google Ngram Viewer Plot: USAF Technologies, 1984–2008



SOURCE: Google Books Ngram Viewer, 2015.
NOTE: Data smoothing value = 1.
RAND *RR1044-2.5*

[52] The technology terms and phrases were *air-launched cruise missile*, *airborne sensors*, *atomic bomb*, *cheap access to space*, *directed energy*, *laser and particle beam weapons*, *GPS*, *hypersonic flight*, *ICBM*, *JDAM*, *jet engines*, *nuclear weapons*, *precision strike*, *Predator unmanned aerial vehicle*, *satellite communications*, *space plane*, *Single Stage to Orbit*, *supersonic aircraft*, *unmanned aerial vehicles*, *stealth bombers*, and *stealth fighters*. The airpower concepts were *air offensive*, *Army Air Service*, *Army Air Corps*, *long-range bombing*, *nuclear air offensive*, *strategic bombers*, *strategic bombing*, *air and space power*, *air campaign*, *air superiority*, *air dominance*, *air force*, *airpower*, *airpower was decisive*, *aviation*, *coercive airpower*, *decisive airpower*, *air-mindedness*, *space power*, *space warfare*, *strategic air command*, *technology and airpower*, *USAF*, *airmen*, and *victory through airpower*.

[53] Ngram Viewer is most effective when used with unique terms. Abbreviations and technical designations often represent multiple items and, therefore, can produce misleading results. Even some words have to be used with care. For example, *drone* most typically refers to bees, not aircraft, in publications.

development of the F-22, well prior to the introduction of the JDAM bomb. Both likely would have peaked in 2001 if not for 9/11 and the subsequent widespread use of JDAMs in Iraq and Afghanistan—which delayed its peak until 2004. *Unmanned aerial vehicle* may have peaked, but more recent data are necessary to conclude that.

Conclusions

This chapter sought to make the case that the success of airpower narratives in the 20th century was driven more by the exceptionally high social currency of aviation and airpower at the time than by the specific arguments or narrative elements that airmen presented to the public. If that assessment is correct, it has significant implications for USAF leaders and others who wish to convey airpower arguments to the public. First, it suggests that a prospective narrative must begin with an understanding of the recent, current, and likely near-term social currency of the ideas. Although none of the services have much direct control over social currency, there may be new ways to raise their visibility (beyond the day-to-day public affairs efforts using social media, television ads, and the like). In the case of the USAF, the service most associated with advanced technologies,[54] efforts to better publicize technology breakthroughs might be helpful. That said, social currency is largely outside USAF control, a factor that must be understood and adapted to rather than influenced.

The next chapter will discuss the evolution of USAF narratives over the past century, identify the structural elements found in the more compelling airpower narratives, and explore how USAF narratives can adapt to an environment in which the social currency of airpower is relatively low.

[54] See Chapter Four for supporting evidence.

CHAPTER THREE

U.S. Air Force Public Narratives, 1917–2014

Introduction

From the end of World War I to today, U.S. airmen have reached out to the American public to advocate on behalf of military airpower. Billy Mitchell, after unsuccessful attempts to advance his vision of aviation within the government, wrote that "Changes in military systems come about only through the pressure of public opinion or disaster in war."[1] More typically, airmen have pursued a balanced strategy that sought to advance airpower capabilities through internal government processes as well as public outreach.

Mitchell and other early airmen sought to educate, inspire, and mobilize public support to achieve several goals: (1) expand investment in military aviation to achieve technological dominance, (2) create an organization devoted to advancing military and commercial aviation, (3) promote "airmindedness"—a unique perspective on time, distance, geography, technology and military affairs, and (4) convince Congress to fund major air force programs. Their vehicles to reach the public included record-breaking flights (and associated media events), speeches, media interviews, articles, books, congressional testimony, and service documents. Although the outreach methods and styles have evolved over the past century, the emphasis on technology, independence (both organizational and operational), and airminded-

[1] Quoted in Mark Clodfelter, "Molding Airpower Convictions: Development and Legacy of William Mitchell's Strategic Thought," in Phillip S. Meilinger, ed., *The Paths of Heaven: The Evolution of Airpower Theory*, Maxwell AFB, Ala.: Air University Press, 1997, p. 90.

ness has remained throughout. These themes line up nicely with the key characteristics of USAF organizational culture identified by Jeffrey Donnithorne: technology-centered, autonomously decisive, future oriented, occupationally loyal, and self-aware.[2]

In her 2012 RAND paper "*Over Not Through": The Search for a Strong, Unified Culture for America's Airmen*, Paula Thornhill argues that in the history of the USAF, five distinct internal cultural narratives can be identified. These are "Over Not Through" (ONT), "Give Me Liberty" (GML), "Victory Through Air Power" (VTAP), "Peace Is Our Profession" (PIOP), and "We Are Critical Enablers" (WACE). These narratives include the USAF origin story as well as the dominant ideas uniting the organization at various points in its history. Thornhill notes that "as the Air Force organizationally matures, these identities increasingly overlap and coexist. Each narrative has a period or periods of dominance but always persists in the background as another dominant narrative emerges."[3] Thornhill concludes that "Over Not Through" has the best potential to be the unifying narrative for the USAF because "it emphasizes the fusing of independent-minded Airmen with a willingness to embrace new technologies and a devotion to innovation that collectively produces creative solutions to vexing national problems."[4]

An excellent example of overlap, and something discussed at greater length below, are the "Over Not Through" and "Give Me Liberty" narratives. Immediately after World War I, airmen came to believe that they had a compelling case for the revolutionary nature of airpower but that they must achieve institutional independence to have any hope of generating the resources, focus, and sustained support necessary to compete with European nations who then led the world in aviation technology and concepts.[5] Although we can identify periods

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2 Jeffrey W. Donnithorne, *Culture Wars: Air Force Culture and Civil-Military Relations*, Maxwell AFB, Ala.: Air University Press, 2013, pp. 27–35.

3 Thornhill, 2012, pp. 2–3.

4 Thornhill, 2012, p. 9.

5 Not all airmen made this association. Generals Benjamin Foulois and Mason Patrick both believed that independence was necessary because the War Department and Army had failed to address major training and equipment shortfalls and were insufficiently energetic in

where one or the other was more prominent in USAF narratives, both themes were critical to the institution in its early decades and continue as narrative themes even today.

Thornhill's narratives were intended to capture the "Air Force culture that Airmen think they joined."[6] They also, not surprisingly, offer insights into what airmen were saying to outside audiences. Indeed, they were the starting point for this analysis of the USAF public narrative. Although internal and external narratives have somewhat different purposes and emphases, problems arise if they are substantially misaligned. Thornhill's analysis suggests that the USAF's narratives were well aligned, since her five clearly capture core elements of both the internal and external narratives.

This chapter uses Thornhill's five narratives as a framework to understand the USAF public narrative between 1917 and 2014. For each narrative period, a principal public narrator is identified and their writings explored. The evolution of airpower theory is discussed only to the extent it is necessary to explore public narratives. There is a large and rich literature on airpower theory that need not be reproduced here.[7] Also, the reader should keep in mind that the focus is on public narrative. If an idea was not in the public domain during a narrative period, it will receive at most a passing reference. During some periods, there were important secondary or competing public narratives; these are discussed also, although in less detail.

It is worth noting that airpower narratives have been not only overlapping but also often in intense competition. Within the service,

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developing aviation as an important branch. Neither was a public advocate of independent "strategic" uses of airpower. See Robert P. White, *Mason Patrick and the Fight for Air Service Independence*, Washington, D.C.: Smithsonian Institute Press, 2001.

6 Thornhill, 2012, p. 2.

7 Phillip S. Meilinger, ed., *The Paths of Heaven: The Evolution of Airpower Theory*, Maxwell AFB, Ala.: Air University Press, 1997; Michael S. Sherry, *The Rise of American Air Power: The Creation of Armageddon*, New Haven, Conn.: Yale University Press, 1987; and Benjamin S. Lambeth, *The Transformation of American Air Power*, Ithaca, N.Y.: Cornell University Press, 2000.

different tribes of airmen have fought over narrative.[8] For example, advocates of pursuit aviation (notably Claire Chennault) competed with and ultimately lost out to advocates of strategic bombing at the Air Corps Tactical School in the 1930s.[9] This institutional and intellectual competition between USAF fighter and bomber cultures has been a central feature of the institution for much of its life.[10] Furthermore, there has rarely been a single officially sanctioned USAF public narrative. Indeed the most famous narratives—"Over Not Through," "Give Me Liberty," and "Victory Through Air Power"—were popularized not by the institution (whether the Army Air Service, Army Air Corps, Army Air Forces, or USAF) or by chiefs of the air branch but by individuals (Billy Mitchell and Alexander de Seversky) who had no mandate as official spokesmen.

Mitchell was Assistant Chief of the Army Air Service during his most active period of outreach, but he was often at odds with his superiors (including Generals Charles T. Menoher and Mason Patrick and Secretaries of War Newton D. Baker and John W. Weeks) over fundamental questions such as service independence and strategic bombing and published his key writings without their approval.[11] Alexander de Seversky, although an advisor to the War Department, acted solely as a private citizen in his airpower advocacy activities. Furthermore, both presented airpower narratives in ways that service leaders—responsible for maintaining civil relations with the Navy and with superiors in the War Department—at times found unhelpful.

Another example of an unofficial airpower narrative is found in the 1943 ad campaign "Air Power Is Peace Power" that public relations firm Hill and Knowlton conducted on behalf of the aircraft manufacturers trade organization. Their assignment was to "increase

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8 See Carl Builder, *The Icarus Syndrome: The Role of Air Power Theory in the Evolution and Fate of the U.S. Air Force*, New Brunswick, N.J.: Transaction Publishers, 1994.

9 See Robert T. Finney, *History of the Air Corps Tactical School: 1920–1940*, Washington, D.C.: Center for Air Force History, 1998, pp. 75–78.

10 See Mike Worden, *Rise of the Fighter Generals: The Problem of USAF Leadership*, 1945–1982, Maxwell AFB, Ala.: Air University Press, 1998.

11 White, 2001, pp. 45 and 115.

public support for air power, which would translate into federal spending on research and development and military procurement." Hill and Knowlton "prepared radio programs, polished congressional testimony and sent mass mailings to the 800,000 member American Legion."[12]

Finally, the USAF public narrative was not only contested among airmen and airpower supporters but by outsiders as well. In particular, the role of airpower in American military strategy was criticized[13] from the very beginning by various opponents outside the USAF, including the institutional Army, War Department, Department of the Navy, Marine Corps, and a host of military theorists, academic and other critics.[14] Airmen, airpower theory, and airpower's past, current, and future contributions to U.S. military operations are debated to this day among defense intellectuals and military professionals.

Narratives and Influence Pathways

For this report's purposes, a narrative is a coherent story told with the intention of creating an effect in a particular audience.[15] A coherent narrative has clear and natural movement from beginning to middle to

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[12] Courtwright, 2005, p. 124. See also Karen Miller, "'Air Power Is Peace Power': The Aircraft Industry's Campaign for Public and Political Support, 1943–1949," *Business History Review*, Vol. 70, No. 3, Autumn 1996, pp. 297–327.

[13] Colin Gray discusses the contested nature of airpower in *Airpower for Strategic Effect*, Maxwell AFB, Ala.: Air University Press, 2012.

[14] Scholarly reassessments of airpower theory and airpower's contribution in past conflicts include Sherry (1987); Clodfelter (1989); Pape (1996); Gentile (2000); Daryl G. Press, "The Myth of Air Power in the Persian Gulf War and the Future of Warfare," *International Security*, Vol. 26, No. 2, Fall 2001, pp. 5–44; and Biddle (2002). There also is a less measured stream of criticism represented in works such as Robert Farley's *Grounded: The Case for Abolishing the United States Air Force* (Louisville, Ky.: University Press of Kentucky, 2014) and Martin van Creveld's *The Age of Airpower* (New York: Public Affairs, 2011). For a critique of van Creveld, see Karl Mueller, "Sky King," *The American Interest*, December 9, 2011.

[15] This is consistent with Harold Lasswell's five questions that define an act of communication: Who? Says what? In which channel? To whom? With what effect? See Harold D. Lasswell, "The Structure and Function of Communication in Society," in Lyman Bryson, ed., *The Communication of Ideas*, New York: Cooper Square Publishers, 1964 (originally published in 1948), p. 37. For a discussion of narrative in national security analysis, see Lawrence

end.[16] A theatrical narrative, for example, tells a story to entertain an audience by introducing characters and a plot in the beginning, creating dramatic tensions in the middle, and (traditionally) concluding by resolving the primary tensions in the story. As noted above, the USAF public narrative seeks to influence the public to support airpower. An example would be Billy Mitchell presenting a public narrative in his book *Our Air Force* (1921), wherein he explained how adversary air forces would threaten American cities in the future (beginning), that the primary defense against such a threat would be the United States' own air force (middle), and that developing a world-class air force requires an independent Department of Aeronautics (end).

As noted at the beginning of this chapter, airmen developed public narratives because they believed there was a causal relationship between what they said and the outcomes they desired. The implied causal chain is (1) USAF public narrative influences public opinion, (2) a supportive public makes their views known to elected representatives, and (3) elected representatives reflect constituent views in their support for USAF budgets, independence, and major programs.[17]

Is there any historical or scholarly evidence to evaluate this causal hypothesis? As noted in the introductory chapter of this report, USAF narratives do not vary sufficiently on quantifiable dimensions for narrative to be a formal independent variable. Additionally, limited public opinion data on service preferences (only ten comparable data points for 1949–2014) and only minor variations in service budget share after 1960 also make statistical analysis problematic.

What about the assumption regarding the link between public opinion and policy outcomes? We have more, although contradic-

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Freedman, *The Transformation of Strategic Affairs*, Adelphi Paper 379, New York: Routledge, 2006, especially pp. 22–26.

[16] For more on theories of narrative, see H. Porter Abbott, *The Cambridge Introduction to Narrative*, Cambridge, UK: Cambridge University Press, 2008; and Rick Altman, *A Theory of Narrative*, New York: Columbia University Press, 2008.

[17] Although a representative democracy, the United States model has always contained a significant popular element through which citizens influence policy not just by voting but also by expressing their views on policy issues to elected officials. See David Held, *Models of Democracy*, Stanford, Calif.: Stanford University Press, 2006.

tory, evidence on that score. In a statistical analysis of the relationship between constituent views and congressional votes, Glazer and Robbins found that U.S. congressmen are responsive to public opinion, observing that "an appreciable amount of responsiveness" occurs "when the prevailing opinion in their district changes."[18] Earlier work by Monroe investigated policy outcomes at the national level and found that "about two-thirds of the cases demonstrate consistency between public opinion and public policy."[19] In contrast, more recent work by Gilens and Page found that when policy outcomes are considered at the national level "economic elites and organized groups representing business interests have substantial independent impacts on U.S. government policy, while mass-based interest groups and average citizens have little or no independent influence."[20] Thus, even if USAF public narratives reach the public and are so compelling that citizens contact their elected representatives, the policy impact of such actions is uncertain and may be outweighed by other factors.

There are, of course, other possible influence pathways. The USAF narrative may influence opinion leaders, particularly by framing their understanding of military problems, which could lead to favorable news coverage, op-eds, speeches, books, and movies.[21] This appears to be the case in the 1940s and 1950s, when prominent columnists, radio personalities, newspaper and magazine owners, and even Walt Disney played large roles as airpower advocates.[22] A substantial body of public opinion scholarship (elite cueing theory) argues that the public

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[18] Amihai Glazer and Marc Robbins, "Congressional Responsiveness to Constituency Change," *American Journal of Political Science*, Vol. 29, No. 2, May 1985, p. 259.

[19] Alan D. Monroe, "Consistency Between Public Preferences and National Policy Decisions," *American Politics Quarterly*, Vol. 7, No. 1, January 1979, p. 3.

[20] Martin Gilens and Benjamin I. Page, "Testing Theories of American Politics: Elites, Interest Groups, and Average Citizens," *Perspectives on Politics*, September 2014, Vol. 12, No. 3, pp. 564–581.

[21] For more on conceptual framing, see Pippa Norris, Monague Kern, and Marion Just, eds., *Framing Terrorism: The News Media, the Government and the Public*, New York: Routledge, 2003.

[22] For a discussion of airpower advocacy in American popular publications and film after World War II, see Call, 2009.

often "cues" off the opinions of prominent partisan leaders, offering an indirect path to the public.[23] Opinion leaders might also lobby for airpower in more private settings, arguing the case with business leaders or elected officials. Finally, the USAF public narrative might directly reach elected officials independent of the work of citizen activists or elites. Examples include articles or op-eds in respected publications, official USAF documents, or testimony before Congress.

Airmen as Authors

The commercially published book was (along with articles in popular periodicals) the most direct and visible means used by airmen to reach the American public prior to the Internet and social media era.[24] Rickenbacker's *Fighting the Flying Circus* (1919) was the first, more of a war memoir than an airpower treatise, but it was quickly followed by books intended to educate the public about aviation and airpower. The earliest books, such as Billy Mitchell's *Our Air Force* (1921) and *Winged Defense* (1925), Hap Arnold's *Airmen and Aircraft* (1926), and Mason Patrick's *The United States in the Air* (1928), all played important roles as primers on this new technology. Mitchell's *Our Air Force*, for example, described military aviation functions and organization, described the requirements for a civil aviation system, and made the case that a new cabinet-level department of aeronautics was necessary to advance aviation in the United States. The most prominent airman of the decade, Charles Lindbergh, also wrote a book, *We*, describing his cross-Atlantic flight, published a mere two months after the flight. Only two books were published in the 1930s by prominent airmen, Mitchell's *Skyways* (1930) and Arnold and Eaker's *This Flying Game* (1936). Both were updates to their earlier airpower primers.

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[23] See Adam J. Berinsky, *In Time of War: Understanding American Public Opinion from World War II to Iraq*, Chicago, Ill.: University of Chicago Press, 2009.

[24] Commercial film was perhaps even more powerful but was indirect, since neither the USAF nor airmen were in the motion picture business. That said, Disney's film version of *Victory Through Air Power* (combining clever animations and appearances of de Severesky as narrator and teacher in a powerful example of wartime propaganda) might as well have been a de Seversky production. For more on aviation and film, see Paris, 1995, and Call, 2009.

The 1940s saw more of a mix of topics, including airpower primers and theory but also memoirs that included detailed war reporting, institutional histories, and a vision for the future USAF. Arnold and Eaker's *Winged Warfare* (1941), de Serversky's *Victory Through Air Power* (1942), Rickenbacker's *Seven Came Through* (1943), Brereton's *The Brereton Diaries* (1946), Lindbergh's *Of Flight and Life* (1948), Kenney's *General Kenney Reports* (1949), Chennault's *Way of a Fighter* (1949), and Arnold's *Global Mission* (1949) may represent the most influential decade of publishing by airmen. George Gallup estimated that de Seversky alone reached over 20 million people, although that included all his varied outreach activities.[25]

The 1950s saw two books by prominent airmen, Lindbergh's Pulitzer Prize–winning *The Spirit of St. Louis* (1953) and de Seversky's *Air Power: Key to Survival* (1950). The de Seversky book sought to update airpower theory in the atomic age. The 1960s tied the 1940s in volume with six books, covering a wide range of topics. These were Power's *Design for Survival* (1964), LeMay's *Mission with LeMay* (1965), Twining's *Neither Liberty nor Safety* (1966), *Rickenbacker: An Autobiography* (1967), LeMay's *America Is in Danger* (1968), and Foulois's *From the Wright Brothers to the Astronauts* (1968). The Power, Twining, and LeMay books all addressed national security strategy at the highest level and had relatively little to say about airpower per se.

In the 1970s, two histories were published: Hansell's *The Air Plan That Defeated Hitler* (1972) and Momyer's *Air Power in Three Wars* (1978). The 1980s saw LeMay and Yenne's *Superfortress* (1988) and Warden's *The Air Campaign* (1989). The 1990s saw Doolittle's *I Could Never Be This Lucky Again* (1991) and Clancy and Horner's *Every Man a Tiger* (1999). The 00s were the fourth decade in a row with just two books: Glosson's *War with Iraq* (2003) and Myers's *Eyes on the Horizon* (2009). Finally, the two volumes of McPeak's autobiography were published between 2010 and November 2014: *Hangar Flying* (2012) and *Below the Zone* (2013).

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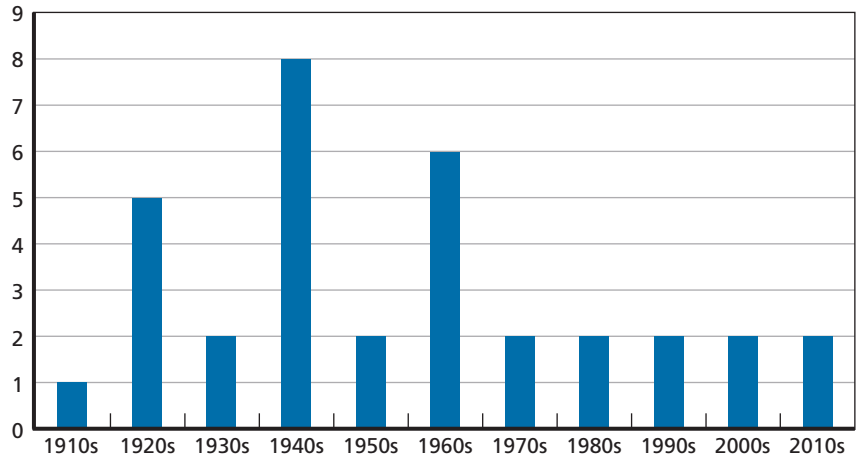
[25] Phillip S. Meilinger, "Alexander P. de Seversky and American Airpower," in Meilinger, 1997, p. 256.

Figure 3.1 displays books written by prominent airmen by decade. This is an imperfect measure of outreach, because the topics of the books varied greatly (from airpower theory to autobiography), the total number of books was small, annual variation was limited, and timing of publications at times greatly lagged the topic (e.g., Doolitttle's autobiography about events in the first half of the 20th century was published in 1991).

USAF Public Narratives, 1917–2014

The remainder of this chapter follows the evolution of the USAF public narrative through Thornhill's six eras. This will be done through the voices of the principal narrators and others who supplement or contest those views. This is by no means a comprehensive treatment of all competing narratives since 1917. The reader is likely to find a former Secretary of the Air Force, Chief of Staff, other senior airman, or airpower

Figure 3.1
Airpower Books Authored by Prominent Airmen, 1918–2013



SOURCE: RAND.

RAND *RR1044-3.1*

thinker whom they respect either missing or discussed only in passing in what follows.

For example, secretaries of the Air Force and chiefs of staff play a large role in presenting the USAF to the public through congressional testimony, speeches, and interviews. The CEO responsibilities of their jobs, however, make it difficult for them to present focused narratives. Typically, these leaders speak publicly about the full range of issues they confront as managers: manpower and personnel, acquisition and logistics, force employment, and airpower strategy. They must represent the entire institution, and even the most innovative and forward thinking must use much of their narrative capital dealing with crises of one sort or the other. For that reason, the reader is likely to find Air Force secretaries and chiefs of staff playing a smaller role in these narratives than might otherwise be expected.[26]

1917–1940

Thornhill's first two USAF cultural narratives—"Over Not Through" and "Give Me Liberty"— largely overlapped during this period. ONT, the idea that airmen could strike directly at enemy capacity and will to fight by overflying the enemy's naval "line of battle" and ground forces—was first embraced by American airmen during World War I (most notably by then Colonel Billy Mitchell), although the war ended before U.S. forces had the capacity to execute deep attacks against German industrial and population targets. U.S. efforts to implement ONT were limited to tactical strikes at forces in rear areas.

ONT, the first public narrative presented by American airmen, spoke directly to a problem very much on the mind of American and European publics, civilian leaders, and military professionals. The

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[26] General John Jumper is a good example. Jumper was an able and energetic spokesman for the USAF and airpower, particularly while serving in key positions during two critical periods. Jumper was commander of U.S. Air Forces in Europe (USAFE) during Operation Allied Force in 1999 and became chief of staff five days before 9/11, serving until September 2005. Jumper was a strong proponent of airpower and presented themes consistent with Victory Through Air Power, but like most chiefs of staff he was more concerned about representing the entire institution and working effectively with joint partners than in presenting a narrower narrative.

problem was how to avoid a repeat of the slaughter and indecision of the Great War, in which ground maneuver was largely replaced by an established and fortified front that moved rarely and only then at great cost. Military professionals were desperate for a concept and technology that returned to warfare "the attribute which had made it endurable, its capacity to produce decisions at a tolerable cost."[27]

Although the United States did not suffer the terrible casualties of the European combatants, American airmen nevertheless quickly became strong champions of the idea that airpower could avoid costly or indecisive naval and land combat. Billy Mitchell was first exposed to these ideas through his association with allied thinkers such as General Hugh Trenchard, commander of the Royal Flying Corps; General Jan Christian Smuts, author of an influential report to the British government on strategic bombardment; Italian aircraft designer Gianni Caproni, who corresponded with Mitchell; and Italian airman Giulio Douhet, whose 1921 book *The Command of the Air* presented these ideas in their starkest form.[28]

Mitchell first proposed organizing elements of the American Expeditionary Force along tactical and "strategical" lines. In a June 13, 1917, memorandum, Mitchell argued that "strategical" aviation "would have an independent mission very much as independent cavalry used to have [and] would be used to carry the war well into the enemy's country." Mitchell argued that this would have "a greater influence on the ultimate decision of the war than any other arm."[29] Two years later, Mitchell wrote a paper titled "Tactical Application of Military Aeronautics" in which he argued for "hitting an enemy's great nerve centers at the very beginning of the war so as to paralyze them to the greatest extent possible."[30]

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[27] Russell Weigley, *The American Way of War: A History of United States Military Strategy and Policy*, Bloomington, Ind.: Indiana University Press, 1977, p. 223.

[28] Alfred F. Hurley, *Billy Mitchell: Crusader for Air Power*, Bloomington, Ind.: Indiana University Press, 1975, pp. 26–28; and Weigley, pp. 223–228.

[29] Cited in Clodfelter, 1997, p. 85.

[30] Cited in Clodfelter, 1997, p. 88.

Mitchell first presented his ideas as public narrative in *Our Air Force: The Keystone of National Defense* (1921), the first of his four books on airpower.[31] In *Our Air Force*, Mitchell presents the public with what may be the world's first primer on airpower strategy, doctrine, and organizational requirements—all informed by and illustrated with examples from his recent experience organizing and commanding U.S. Army Air Service elements in combat. He devotes most of the book to developing a logical progression of ideas: describing how the United States can no longer rely on the oceans to protect it from aggression, how America's industrial centers will soon be at risk of enemy air attack, and why "the only defense against an air force is another air force."[32] He furthermore describes in detail how commercial, civil, and military aviation must be seamlessly integrated to create mastery of the air. Mitchell's argument therefore follows the following logic:

1. Enemy airpower poses a severe threat to the United States.
2. This threat can only be defeated by U.S. mastery of the air.
3. The capabilities required to master the air can only be developed if the nation's most gifted and dedicated aviators, engineers, and other airpower experts are brought together in an institution solely and fully dedicated to the development of integrated commercial, civil and military airpower.

In these themes, one can see the outlines of both the ONT and GML narratives, as well as the foundations for 20th century American airpower theory: the decisive nature of airpower, the importance of population and industrial centers as targets, the critical role of the air force to defend the nation, and the necessity of an independent organization dedicated to advancing aviation. Given Mitchell's personal commitment to and historic association[33] with the creation of an indepen-

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[31] The other books are *Winged Defense* (1925), *Skyways* (1930), and *Memoirs of World War I* (published posthumously in 1960). Full citations are provided in the bibliography.

[32] William Mitchell, *Our Air Force: The Keystone of National Defense*, New York: E. P. Dutton and Company, 1921, p. 14.

[33] See Waller, 2004.

dent air force, one might argue that is the single most important theme in the book. Although the independence argument is a major part of the book, it is presented only after the case is made for the revolutionary nature of airpower. By itself, the independence case would make little sense unless the public had already embraced the preceding arguments about airpower.

We don't have any direct evidence regarding the immediate public reaction to Mitchell's first foray into airpower theory. Certainly there was great interest in military aviation, and, as noted earlier, concerns about air attacks on population centers were commonly expressed in popular writings. The public also closely followed the air-naval tests that culminated in the sinking of the German battleship *Ostfriesland* in July 1921 and especially the Mitchell trial in 1925, where the issue of air force independence became front-page news.

In his 1921 book, Mitchell did not articulate a vision of American airpower striking at enemy industrial centers, even though he had described the concept in internal Army papers.[34] Hurley suggests that Mitchell's "defensive emphasis was . . . in step with the national mood, because isolationism, pacifism, and a public demand for reduced government spending were on the upswing."[35] By 1925, Mitchell's writings were decidedly more offensive, advocating attacks on residential areas and a focus on the people's will to fight:

> Aircraft do not need to pierce the line of either navies or armies.[36] They can fly straight over them to the heart of a country and gain success in war. To gain a lasting victory in war, the hostile nation's power to make war must be destroyed—this means the manufactories, the means of communication, the food products,

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[34] Hurley, 1975, pp. 178–179.

[35] Hurley, 1975, p. 56.

[36] Mitchell became convinced that the aircraft and submarine revolutionized naval warfare, making ships of the line obsolete. He championed the series of experiments that included the sinking of the *Ostfriesland*. Mitchell's arguments and the successful experiments created great controversy and much elite and public debate. See, for example, Frederick C. Hicks, "Case of the Airplane Against the Battleship," *New York Times*, August 28, 1921. Congressman Hicks was chairman of the Congressional Committee on Naval Aviation.

> even the farms, the fuel and oil and the places where people live and carry on their daily lives. Not only must these things be rendered incapable of supplying armed forces but the people's desire to renew the combat at a later date must be discouraged. Aircraft operating in the heart of an enemy's country will accomplish this object in an incredibly short space of time, once the control of the air has been obtained and the months and even years of contest of ground armies with a loss of millions of lives will be eliminated in the future.[37]

The idea that civilian populations, industrial centers, and cities would be targets for air attack in future conflict, as noted above, was not original to Mitchell and even predated World War I, appearing in popular fiction such as H. G. Wells' 1908 novel *The War in the Air.* Despite the idea being credited variously to Britain's Air Marshal Hugh Trenchard, Italian Giulio Douhet, and Billy Mitchell, it was German airmen who originated the idea of strategic bombing and, along with the Italian Air Force, put it into practice. Using Zeppelin airships initially and then both Gotha and Zeppelin-Staaken four-engine bombers in the last two years of the war, the German Air Force struck London and other cities in dozens of raids between 1915 and 1918.[38] Ironically, German airmen were not impressed with the results and dropped the idea and the development of long-range bombers in subsequent years, much to their detriment in World War II.

Rather, it was Trenchard, B. H. Liddell Hart, Douhet, Caproni, and Mitchell who embraced the strategic bombing concept and helped institutionalize it in their respective air forces.[39] Mark Clodfelter argues

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[37] Mitchell, 1925, pp. 126–127.

[38] Raymond H. Fredette, *The Sky on Fire: The First Battle of Britain: 1917–1918*, New York: Harvest Books, 1966.

[39] Mitchell was by no means the only American airman thinking along these lines, just the public voice. For example, the distinction between tactical and strategic employment, already embraced by the Royal Air Force, was explored in an internal paper by U.S. Army Major Frank Parker. Similarly, Lieutenant Colonel Edgar S. Gorrell developed plans for strategic bombing in 1918, drawing heavily on work done by Royal Naval Air Service Major Hardinge Goulborn Tiverton. For more on Gorrell and Tiverton, see Clodfelter, 2010, pp. 17–25. For more on Parker, see Johnson, 1998, p. 48, and footnote 60 on p. 240.

that the American and British enthusiasm for strategic bombing was based in large part on Progressive Era ideals reborn after the carnage of World War I. Airmen believed that such wars were too horrible to wage again and could be prevented or shortened through the decisive use of airpower:

> The airmen contended that a clash of armies, with its subsequent slaughter, was unnecessary to fight and win future conflicts. Instead, the truly vital ingredients of modern war—the essential industries that produced weapons and fuel, key communications centers, and lines of transportation—were vulnerable to attack from the air. The loss of those installations would not only wreck a nation's ability to fight, it would also sap the will of the populace, because the same facilities needed to wage modern war were also necessary to sustain normal, day-to-day life.[40]

Russell Weigley, in a similar vein, argued that "For officers of the new Army Air Service seeking freedom from the preconceptions of the ground soldiers, self-interest seemed to converge with humanity in the search for an alternative to the brutal futility of the Western Front by turning to the air."[41]

After Mitchell's court-martial in late 1925, he left the military but continued speaking out on airpower issues in articles and one book. The last book of Mitchell's published during his lifetime was *Skyways: A Book on Modern Aeronautics* (1930). *Skyways* was an update of Mitchell's two earlier books, covering topics from "Learning to Fly" to "Aeronautical Law." Mitchell devotes only two of the book's 20 chapters to military aviation. These chapters restate and expand the ONT narrative, as well as his views on the vulnerability of navies to air attack. With respect to ONT, in *Skyways* Mitchell now emphasizes attacks on "vital centers":

> The advent of air power which can go straight to the vital centers and entirely neutralize or destroy them has put a completely new

[40] Clodfelter, 2010, p. 3.

[41] Weigley, 1977, pp. 223–224.

> complexion on the old system of making war. It is now realized that the hostile main army in the field is a false objective and the real objectives are the vital centers. The old theory, that victory meant the destruction of the hostile main army, is untenable. Armies themselves can be disregarded by air power if a rapid stroke is made against the opposing centers, because a greatly superior army numerically is at the mercy of an air force inferior in numbers. There is no place on the world's surface that aircraft cannot go.[42]

In *Skyways*, Mitchell also discusses gas attacks on urban centers for the first time in the American airpower narrative, noting how after an aircraft has dropped its gas bomb the "great concentration of gas surges along, entering the lower stories of buildings. Men, women and children come rushing out and fall dead in the streets."[43] Mitchell's emphasis on population bombing with chemical weapons was a truly unhelpful contribution from the perspective of the institutional air force, given the continuing public pacifism in the early 1930s. Also, by 1935 airmen at the Air Corps Tactical School had firmly rejected population bombing,[44] embracing precision daylight bombardment of enemy industrial targets as Air Force strategic bombing doctrine.[45]

Air Force leaders also likely did not appreciate Mitchell's continued tendency to make extravagant claims about airpower, such as

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[42] Mitchell, 1930, pp. 255–256.

[43] Mitchell, 1930, p. 263. Douhet and Liddell Hart both proposed use of chemical weapons in earlier works. See Giulio Douhet, *The Command of the Air*, translated by Dino Ferrari, Washington, D.C.: Office of Air Force History Imprint, 1983 (originally published in Italian in 1921); and B. H. Liddell Hart, *Paris or the Future of War*, New York: E. P. Dutton and Co, 1925.

[44] Although U.S. airmen had a doctrinal preference for precision daylight bombing of industrial targets, World War II wartime demands led them to attack targets in the heart of German cities with full knowledge that civilian casualties would be high. Against Japan, precision bombing was quickly dropped in favor of the firebombing of cities. And, of course, the decision to use nuclear weapons against Nagasaki and Hiroshima was also not consistent with that doctrinal preference. For more on the firebombing of Japanese cities, see Kenneth P. Werrell, *Blankets of Fire: U.S. Bombers over Japan During World War II*, Washington, D.C.: Smithsonian Institution Press, 1996.

[45] Finney, 1998, p. 68.

his 1934 statement in the *New York Times* that the air force needed only 400 modern aircraft to meet defense needs, observing that "One modern ship [aircraft] could cause the evacuation of New York City and three could demoralize and destroy Japan."[46] This grossly underestimated the number of military aircraft the United States would need in the coming years.

In summary, Billy Mitchell became the primary narrator for both the "Over Not Through" and "Give Me Liberty" narratives.[47] A prolific and energetic writer, Mitchell's books and articles in *Liberty*, the *Saturday Evening Post*, *Colliers*, and *Outlook* reached millions of readers during the interwar years, and his ideas, in style if not always in substance, were a good fit for aviation's golden age.[48]

Other Voices

Three other airmen made important contributions to the public narrative in this period. Major General Mason Patrick, as chief of the Army Air Service, spoke frequently and wrote articles in popular publications. He focused on educating the public about aviation broadly and military aviation specifically, seeking to build public support for a larger and more advanced aviation branch. He largely stayed away from the debate over independence and said relatively little about strategic uses of airpower. Mason's book *The United States in the Air* (1928) was published after his retirement and is a memoir of his years as chief of the Army Air Service and Army Air Corps.[49]

Henry "Hap" Arnold, who rose to be commander of the U.S. Army Air Forces during World War II, wrote *Airmen and Aircraft* (1926), a comprehensive primer on flight that covered topics from aeronautics to pilot training. Ten years later, he co-authored *This Flying*

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[46] "Mitchell Calls It 'Whitewash,'" *New York Times*, July 24, 1934, p. 6.

[47] Benjamin Foulois also argued for an independent air force, but not because he thought an air force could be decisive on its own. Foulois felt that the War Department had simply failed to effectively organize and equip the air arm. See White, 2001, pp. 48–49.

[48] Hurley, 1975, pp. 111–112.

[49] Patrick was chief of the Army Air Service from 1921 to 1926, then the first Chief of the Army Air Corps prior to his retirement in 1927. See White, 2001.

Game (1936) with Ira Eaker (who became commander of 8th Air Force during World War II). *This Flying Game* is another aviation primer, needed by the mid-1930s due to the exceptional advances in aviation technology. Arnold and Eaker present a short history of flight, including details on the many record-setting flights and accomplishments over the previous decade. Like *Airmen and Aircraft*, the book ranges from the technical (e.g., a chapter on "What Makes Airplanes Fly") to a chapter on airpower. The airpower chapter presents a concise and balanced treatment of ONT essentials; that key war-supporting industries are vulnerable to attack from the air and that the "outlined missions of attacking bombers all tend toward achieving that one end desired in any war—breaking down the will of the people."[50] Although Arnold was a Mitchell protégé, he breaks with his mentor in a significant way in this book, treating navies and naval aviation in a balanced and positive way. Arnold and Eaker devote a full chapter, "Flying with the Fleet," to describing the challenges and importance of naval aviation.

Finally, Newton Baker was an important voice during this period, primarily in contesting the ONT narrative. Baker was Secretary of War from 1916 to 1921, then in 1934 headed an aviation committee (the Baker Board) that was tasked to address criticisms that the Army Air Corps was underresourced and badly managed and, more broadly, to advise on the future of civil and military aviation. Baker first expressed moral objections to ONT in a 1918 memo, warning that the United States would never wage "war upon a defenseless civilian population"[51] or engage in bombing that "has as its objective, promiscuous bombing upon industry, commerce or population, in enemy countries disassociated from obvious military needs to be served by such action."[52] Almost two decades later, in its 1934 report, the Baker Board concluded that independent air operations could not be decisive:

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[50] H. H. Arnold and Ira Eaker, *This Flying Game*, New York: Funk and Wagnalls, 1936, p. 129.

[51] Baker to March November 4, 1918, memo quoted in Daniel R. Beaver, *Newton D. Baker and the American War Effort, 1917–1919*, Lincoln, Neb.: University of Nebraska Press, 1966, p. 169.

[52] Quoted in Hurley, 1975, p. 37.

> The idea that aviation can replace any of the other elements of our armed forces is found, on analysis to be erroneous . . . the Army with its own air forces remains the decisive factor in war . . . the ideas that aviation, acting alone, can control the sea lanes, or defend the coast, or produce decisive results in any other general mission contemplated under our policy are all visionary, as is the idea that a very large and independent air force is necessary to defend our country from attack.[53]

Although many of Baker's concerns would be discarded under the pressures of the next war, and he greatly underestimated the potential of airpower, his arguments against airpower's decisiveness had staying power and are similar to the views of modern airpower skeptics.

The interwar airpower debates took on new meaning as World War II began with devastating uses of modern airpower: the Germans integrating air and ground forces in their Blitzkrieg offensive concept in Europe, and the Japanese in their air-ground campaign in China as well as air-naval attacks on Hawaii and the Philippines. ONT and GML did not so much go away as become integrated into a new public narrative focused on achieving victory in the war against Germany and Japan.

1941–1945

"Victory Through Air Power" is the Air Force narrative popularized by Alexander de Seversky during World War II, first in newspaper and magazine articles, then in a 1942 book by that name. Meilinger describes de Seversky: "Fighter ace, war hero, aircraft designer, entrepreneur, stunt pilot, writer and theorist . . . [he] . . . was one of the best known and most popular aviation figures in America during World War II."[54] De Seversky was an airpower narrator second only to Mitchell in his zeal to reach the public, writing over "one hundred major

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[53] Quoted in Robert Frank Futrell, *Ideas, Concepts, Doctrine: Basic Thinking in the United States Air Force, 1907–1960*, Maxwell Air Force Base, Ala.: Air University Press, 1989, pp. 70–71. See also Tate, 1998, pp. 143–149.

[54] Meilinger, 1997, p. 239.

articles and several hundred lesser ones" in the course of his life.[55] "His passion was airpower and his mission was to convince the American people that airpower had revolutionized warfare, becoming its paramount and decisive factor."[56]

In his 1942 book, de Serversky made the case for a wartime strategy of strategic bombardment in which the creation of a large, long-range bomber force would be the national priority.[57] The book presented an expanded and refined version of ONT arguments dating back to Billy Mitchell. The book updated ONT with 11 lessons that de Seversky drew from the previous three years of conflict in Europe:

- "No land or sea operations are possible without first assuming control of the air above.
- Navies have lost their function of strategic offensive.
- The blockade of an enemy nation has become a function of airpower.
- Only air power can defeat air power.
- Land-based aviation is always superior to ship-borne aviation.
- The striking radius of airpower must be equal to the maximum dimensions of the theater of operations.
- In aerial warfare, the factor of quality is relatively more decisive than the factor of quantity.
- Aircraft types must be specialized to fit not only the general strategy but the tactical problems of a specific campaign.
- Destruction of enemy morale from the air can be accomplished only by precision bombing.
- The principle of unity of command, long recognized on land and on sea, applies with no less force to the air.
- Air power must have its own transport."[58]

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55 Meilinger, 1997, p. 267.

56 Meilinger, 1997, p. 239.

57 De Seversky's concept for "air control of the world from the United States" envisioned an air defense radius of action reaching 3,000 miles from U.S. shores and air offense radius of 6,000 miles. See Alexander P. de Seversky, *Victory Through Air Power*, New York: Simon and Schuster, 1942, Chapter XI and map on pp. 316–317.

58 See de Seversky, 1942, pp. 123–150.

Although widely read by an estimated 5 million Americans, the book had significant faults as narrative, because the key ideas were easy to lose among de Seversky's many obsessions, including the failures of the U.S. Army and War Department to advance aviation, criticism of senior airmen (Hap Arnold in particular),[59] and arguments for institutional independence and attacks on sea power.[60] The book's greatest impact may be that through it Walt Disney became an airpower advocate.

Disney was so taken by the book that he teamed with de Seversky to create a film with the same title. Released in 1943, Disney's film combined brilliant animations with professorial yet conversational narrations by de Seversky expounding the logic of strategic bombing. As narrative, the film was superior to the book, presenting a more accessible and vivid case for strategic bombing.[61] That said, the film is classic wartime propaganda and unvarnished airpower advocacy. For example, Meilinger notes that "the film grossly exaggerates the accuracy and effectiveness of bombing attacks. Every bomb dropped in the movie hits its target—all of which are factories or railroad yards—and nothing falls in urban residential areas."[62]

Although the film avoids the book's diatribes against the Army leadership and Navy, it is far from a balanced treatment of the other services; ships carrying tanks and other ground force equipment are shown only as targets for enemy submarine attack and end up on the ocean floor. Modern viewers will detect many other inaccuracies in de Seversky's highly parochial presentation, but the film was nevertheless a big hit, receiving praise from the *New York Times* as a "tour de force" and leading the *Washington Post* to publish a front page editorial titled

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59 See de Seversky, 1942, pp. 289–290.

60 See Meilinger, 1997, p. 251 and 256.

61 The film can be viewed in its entirety on YouTube, online (see bibliography for URL). See Meilinger, 1997, pp. 258.

62 Meilinger, 1997, p. 258.

"Give Air Power Its Wings," which called on President Roosevelt to make the air force an independent service.[63]

Other Voices

Although few airmen disagreed with the VTAP core arguments,[64] de Seversky had many detractors. Hap Arnold, in particular, considered de Seversky's constant criticism of the Army and War Department handling of aviation as harmful to the air force.[65] Indeed, Arnold sought to limit de Seversky's influence, for example, refusing to see the Disney film version of "Victory Through Air Power" until circumstances gave him no choice.[66] Although Arnold doesn't critique de Seversky in public or present an alternative to VTAP, his approach to public outreach could not be more different. This is evident if we compare de Seversky's 1942 book to Arnold and Eaker's 1941 book *Winged Warfa*re.

Winged Warfare was Arnold's third aviation primer, providing an update to his earlier two books, published in 1926 and 1936. Again we see Arnold, not as airpower theorist, but as a pilot, airpower organizer, and leader (he was chief of the Air Corps at the time of publication). In these books, Arnold and Eaker sought to educate the public about aviation and airpower in the broadest sense. *Winged Warfare* is written at two levels: (1) the tactical/technical and (2) the CEO/institutional. There is relatively little discussion of strategy or theory. When theory is addressed, it is in a cautious, understated, and matter-of-fact way, with few of the bold claims of a de Seversky or Mitchell. Arnold and Eaker steer far clear of controversial topics or attacks on other services. Indeed, they demur on whether an independent air force is nec-

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63 Quoted in James K. Libbey, *Alexander P. de Seversky and the Quest for Air Power*, Washington, D.C.: Potomac Books, 2013, p. 208.

64 Although written a bit late for this narrative period, Carl Spaatz's 1946 article describing "strategic air power" in World War II is consistent with VTAP. See Carl Spaatz, "Strategic Air Power: Fulfillment of a Concept," *Foreign Affairs*, Vol. 24, No. 3, April 1946, pp. 385–396.

65 Meilinger, 1997, p. 274, footnote 52.

66 Winston Churchill was a fan of the film and during the August 1943 Quebec conference asked President Roosevelt if he had seen it. Roosevelt agreed to get a copy, and Arnold had a copy flown to Quebec on a military aircraft. The two leaders watched the film twice, then showed it to the Combined Chiefs of Staff. See Libbey, 2013, p. 109.

essary and compliment the Army and Navy on their efforts to advance aviation:

> Many feel that eventually the defensive air component of the nation will be given a status co-ordinate and commensurate with that of the Army and Navy. When that time will come, if it does come, is not yet clear. . . . The Army and Navy, the older services, deserve great credit for the tremendous strides they have made in the development of military and naval aviation.[67]

In one of the few airpower strategy sections, Arnold and Eaker identify four missions for independent air operations: propaganda, reconnaissance, anti-air force operations, and destruction of enemy manufacturing establishments and communication systems.[68] Here we see classic ONT themes updated and informed by the ongoing European war:

> Persistent attacks will be launched immediately on those manufacturing establishments, power plants, and lines of communication which are vital to an enemy in its attempt to gird itself for war. . . . The degree of success with which the opponent can prevent normal efficiency in munitions establishments, will have a tremendous bearing on the outcome of the long struggle.[69]

Regarding attacks on population centers, Arnold and Eaker reflect the prevailing American concept of precision attacks on key industrial nodes:

> It is generally accepted that bombing attacks on civil populace are uneconomical and unwise. . . . The most economical way of reducing a large city to the point of surrender, of breaking its will to resist, is not to drop bombs in its streets, but to destroy

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67 H. H. Arnold and Ira C. Eaker, *Winged Warfare*, New York: Harper and Brothers, p. 244.

68 Arnold and Eaker, 1941, pp. 126–134.

69 Arnold and Eaker, 1941, p. 133.

> the power plants which supply light, the water supply, the sewer lines.[70]

To the extent that they disagree with airmen who advocate population attacks, it appears to be more a matter of feasibility than any specific objection to attacking civilians, as can be seen in the following passage:

> Human beings are not priority targets except in certain special situations. Bombers in far larger numbers than are available today will be required for wiping out people in sufficient numbers to break the will of a whole nation.[71]

Victory Through Air Power had a relatively short life as the most visible airpower public narrative, but its emphasis on striking at the will and capability of an enemy to resist through strategic air campaigns has lived on as a central theme in USAF thinking. It likely would have lasted longer as public narrative if the war had not ended with the atomic bombings of Hiroshima and Nagasaki. The destructive power of the atom bombs brought to the surface all the earlier public fears about airpower as a threat to civilization, leading rapidly to a new public narrative.

1946–1990

The "Peace Is Our Profession" narrative era is distinct in that non-airmen, including the nation's political leadership, civilian strategists, and academics, played large roles in the development and socializing of key ideas, particularly those related to deterrence. These various perspectives are explored in the following pages.

PIOP did not become the official Strategic Air Command slogan until 1958.[72] A public narrative relating airpower to peace, however,

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[70] Arnold and Eaker, 1941, p. 133.

[71] Arnold and Eaker, 1941, p. 134.

[72] "Peace Is Our Profession" first appeared on a sign outside of the Strategic Air Command (SAC) headquarters building at Offutt AFB in late 1957 as part of a reenlistment incentive program. A visiting officer from Westover AFB liked the sign and had a large one constructed

appeared almost immediately after the end of World War II. In October 1945, General Hap Arnold directed three senior airmen—Carl Spaatz, Hoyt Vandenberg, and Lauris Norstad—to study the implications of nuclear weapons for U.S. security and airpower. The Spaatz Board's first report, completed within a month, stressed that the previous American defense policy of mobilization would not work in the face of future atomic threats. Meilinger summarizes the board's findings:

> The atomic bomb's awesome destructiveness meant than an enemy surprise attack could decide a war because there would be no time for mobilization. The United States must, therefore, maintain a strategic bombing force in being capable of either "smashing an enemy air offensive, or launching a formidable striking force." In short, the Air Force "on the alert" was to be America's new first line of defense—and offense—in the future.[73]

With surprising speed, American civilian strategists and senior airmen recognized that nuclear weapons fundamentally changed the nature of the military challenge, particularly the requirement for a historically unprecedented level of readiness, the recognition that war would be deterred or decided based on the capabilities the nation could bring to bear within minutes or hours, and the ultimate emphasis on deterring rather than fighting a war. Although airmen would continue to pursue concepts and capabilities along the lines of the VTAP narrative (although now with a standing force of nuclear armed bombers), deterrence increasingly became the justification and purpose for those capabilities. "Though the notion of deterrence was not yet clearly

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at Westover's main entrance. In early 1958, other SAC bases followed suit. The slogan hit a chord with journalists and the public. Seeing the positive reaction, SAC made it the official motto later in 1958. Ironically, although Curtis LeMay is strongly associated with the slogan, he had left SAC months earlier (July 1957) to become Air Force Vice Chief of Staff. See J. C. Hopkins and Sheldon A. Goldberg, *The Development of Strategic Air Command: 1946–1986 (The Fortieth Anniversary History)*, Offutt Air Force Base, Neb.: Office of the Historian, Headquarters Strategic Air Command, 1986, pp. 63, 80, and 274.

[73] Phillip S. Meilinger, *Hoyt S. Vandenberg: The Life of a General*, Bloomington, Ind.: Indiana University Press, 1989, p. 63.

delineated, the idea was germinating among the members of the Spaatz Board even in the fall of 1945."[74]

Arnold wasted no time incorporating the Spaatz Board insights into the USAF public narrative. Just four months later, in a February 1946 *National Geographic Magazine* article titled "Air Power for Peace," Arnold argued that the United States could no longer wait until a conflict to mobilize forces. Rather it would have to maintain a highly capable and ready force to deter war:

> It is our obligation, now and in the future, to organize our armed forces with the most modern weapons to secure the most powerful striking force at the least expense to the taxpayer. We must do this, not to prepare for another war, because such a catastrophe would almost certainly throw the whole world back for centuries if, indeed, it did not destroy our present civilization. We must do this to *prevent* another war—to perpetuate peace.[75]

Arnold concluded, "With our geographic position, the occupation of our perimeter bases, and our resources, we have it in our power to preserve peace indefinitely."[76] Similarly, civilian strategist Bernard Brodie (who a few years later would conduct studies for the USAF while working at the RAND Corporation) famously wrote in 1946, "Thus far the chief purpose of our military establishment has been to win wars. From now on its chief purpose must be to avert them. It can have almost no other useful purpose."[77]

The 1947 Presidential Air Policy Commission headed by Thomas Finletter drew similar conclusions about airpower's role in maintaining peace through deterrence. Key observations included:

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[74] David R. Mets, *Master of Airpower: General Carl A. Spaatz*, Novato, Calif.: Presidio Press, 1988, p. 315.

[75] H. H. Arnold, "Air Power for Peace," *The National Geographic Magazine*, February 1946, p. 135.

[76] Arnold, 1946, p. 160.

[77] Bernard Brodie, ed., *The Absolute Weapon*, New York: Harcourt and Brace, 1946, p. 76.

- ". . . we believe that the defense of the United States must be based on air power."
- "We need a much stronger air establishment than we now have. The reason for this is that we can no longer follow our traditional procedure of relying entirely on the Navy as our force in being in peacetime."
- ". . . new weapons which can be delivered through the air make it vital that we protect ourselves from attack by way of this new element. An air attack could be so terrible that we must at once create the best conceivable defense against it."
- "This means an air force in being, strong, well equipped and modern, not only capable of meeting the attack when it comes but, even more important, capable of dealing a crushing counter-offensive blow on the aggressor."
- ". . . the hope is that by serving notice that war with the United States would be a most unprofitable business we may persuade the nations of the world to work for peace instead of war."[78]

In 1947, the one-year-old Strategic Air Command was far from the ready force needed to make credible the deterrent threats envisioned by senior airmen and the Finletter commission. There was a flying club atmosphere in which aircraft maintenance was haphazard, training standards low and unrelated to combat demands, and evaluation results faked. Furthermore, the concept of operations for war required all SAC bombers to fly from home bases to Texas to pick up atom bombs at an Atomic Energy Commission facility before flying on to their wartime targets—a completely unworkable plan.[79] In 1948, Curtis LeMay was made commander of SAC with the mission to rapidly reform this dysfunctional command. LeMay did just that, molding SAC into an organization that could meet the exceptionally high

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[78] Thomas K. Finletter, *Survival in the Air Age: A Report*, Washington, D.C.: President's Air Policy Commission, 1947, pp. 10–12.

[79] Curtis E. LeMay with MacKinlay Kantor, *Mission with LeMay: My Story*, New York: Doubleday and Company, 1965, pp. 427–440; and Warren Kozak, *LeMay: The Life and Wars of General Curtis LeMay*, Washington, D.C.: Regnery History, 2009, pp. 280–288.

demands of the deterrence mission. LeMay also popularized the idea of "Peace Through Strength" and captured the essence of deterrence in pithy, direct language:

> A deterrent force is one that is large enough and efficient enough that no matter what the enemy does, either offensively or defensively, he will still receive a quantity of bombs or explosive force that is more than he is willing to accept.[80]

The "Peace Is Our Profession" slogan was invented at SAC in late 1957, after LeMay had departed for the Pentagon, but he did more than any other single leader to make that promise a reality.[81]

Looking beyond SAC, the August 1949 Soviet detonation of an atomic weapon further accelerated movement to the PIOP narrative. Steve Call describes the popular mood and dilemma the Soviet test presented USAF narrators:

> The nation was shocked, for now the image of an aerial attack devastating the United States was more than just science fiction or air power rhetoric. In a curious twist of fate, at the very time air power advocates were striving to reassure Americans that the bomber would always get through, they faced a public desperate for reassurance that Soviet bombers could not.[82]

Although one could imagine that the public desire for air defenses might have forced a shift of resources from offensive to defensive purposes, airmen instead developed a public narrative adapted to these new circumstances. Call explains:

> For while there would be considerable public clamor for effective air defense of North America, air power advocates would insist that no air defense, no matter how extensive, could stop a major-

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[80] LeMay testimony before Senator Symington's subcommittee on airpower, April 1956. Quoted in Futrell, 1989, p. 445.

[81] For "Peace Through Strength" reference, see Kozak, 2009, p. 268. For history of "Peace Is Our Profession," see Hopkins and Goldberg, 1986, pp. 63, 80, and 274.

[82] Call, 2009, p. 79.

> ity, let alone all, of Russia's bombers. Thus the main response to the Soviet atomic bomb among air power advocates was to stress the deterrent capability of a massive U.S. strategic bomber force. Air defense would become a vivid public image, but it is during this period that SAC and the nuclear bomber would become the dominant image in popular culture synonymous with American air power.[83]

General Hoyt Vandenberg, then Air Force chief of staff, wrote in a 1951 *Saturday Evening Post* article that "Every democratic leader in possession of the facts has recognized publicly the one deterrent to overt communist aggression—the certainty that we can retaliate swiftly and bring more destruction to them than they can inflict on us."[84] This shift to a focus on peace is brought out more forcefully in Vandenberg's final paragraph:

> Air power holds catastrophe—and the hope of peace. How long the fear of retaliation of strategic bombing will restrain the Russians from plunging the world into chaos is something only the masters of the Kremlin know. But every day statesmen confer is a reprieve for civilization, sustaining the prayer that all hope will not vanish in atomic dust.[85]

PIOP also applied to the USAF role in NATO. As the 1950s national strategy of Massive Retaliation was replaced by Flexible Response, the USAF played a key role in providing tactical and theater nuclear capabilities to supplement strategic nuclear forces. USAF nuclear-capable fighters based in Europe became a critical element in NATO's evolving nuclear doctrine. This doctrine tied conventional, tactical nuclear, and strategic nuclear forces together in a seamless web, with the idea being that the Soviets could not count on keeping a war conventional. Once the war had gone nuclear, it would then

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[83] Call, 2009, pp. 79–80.

[84] Hoyt S. Vandenberg, "The Truth About Our Air Power," *Saturday Evening Post*, February 17, 1951, p. 100.

[85] Vandenberg, 1951, p. 101.

escalate to the strategic level. When Soviet deployment of the SS-20 intermediate-range ballistic missile (IRBM) in the 1980s threatened this concept, NATO responded by deploying comparable U.S. theater nuclear forces—the U.S. Army Pershing II IRBM and USAF Ground Launched Cruise Missile (GLCM). Thus, USAF nuclear-capable forces assigned to NATO (and in SAC) played key deterrent roles throughout the Cold War. USAF missions also included conventional close air support, battlefield air interdiction, air interdiction, defensive counter air, and offensive counter air, but deep strikes were limited to military targets within East Germany.[86]

Other Voices

The Korea and Vietnam Wars presented a problem for the USAF PIOP narrative, since SAC's strategic nuclear capabilities had failed to deter lower-level aggression by either North Korea or North Vietnam. In the case of Korea, Alexander de Seversky inserted a last-minute forward in his 1950 book *Air Power: Key to Survival* arguing that it was not a "real war," that the United States risked being weakened by a series of peripheral conflicts designed to attrite U.S. forces, and that, therefore, the United States should not intervene militarily. For de Seversky,

> There are no genuine strategic targets in Korea. The sources of North Korean war-making capacity lie elsewhere, in Manchuria and Russia. . . . Control of the air would be decisive if it gave us access to the enemy's heart: his industries, fuel, transportation, communications. But Korea's "heart" is located in Manchuria and Russia, well beyond its frontiers, where it is completely shielded by the cloak of a bogus neutrality.[87]

In short, VTAP did not apply to Korea. Curtis LeMay clearly disagreed with de Seversky, arguing that North Korean cities represented a vital center. LeMay wanted to use incendiary weapons against "the

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[86] For more on NATO air doctrine, see Maris McCrabb, "The Evolution of NATO Air Doctrine," in Meilinger, 1997, pp. 443–484.

[87] de Seversky, 1950, p. xxi.

key cities in North Korea, especially the ones that were supplying its troops."[88]

The problem of limited war would vex airmen during both the Korean and Vietnam conflicts. Secretary of the Air Force Harold Brown, writing during the Vietnam War, observed:

> During the early and mid-1950s, most of us failed to recognize the effects that would result from the replacement of our strategic monopoly by the more limited advantage of strategic superiority. Our superiority still made general war too dangerous for an aggressor, but as the USSR developed a nuclear capability, nuclear war became too dangerous a response for us to make automatically to limited aggression. Hence limited war became the more likely form of conflict.[89]

Brown advocated improvements in the agility and deployability of tactical forces as a remedy to the limited-war problem, believing that such forces could close this gap in deterrent capabilities:

> We now have, or are on the verge of having, tactical forces that can be deployed within a few hours time and supported on a world-wide basis by our global airlift. It seems likely to me that this capability eventually will increase to the point where it may become an effective deterrent to what we might classify as "limited wars"—that is war on the scale of Korea or perhaps Vietnam, as it is today.[90]

Consistent with these limited-war themes, Brown's airpower narrative during the Vietnam War focused more on its tactical contributions than the strategic air campaign against the North, offering a harbinger of "We Are Critical Enablers":

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88 Kozak, 2009, p. 306.

89 Harold Brown, "USAF's Foreseeable Future," *Air Force/Space Digest*, May 1966, p. 43.

90 Brown, 1966, p. 44.

> In Vietnam, air power is again demonstrating that it is indispensable in warfare. It is particularly significant that Air Force close-support operations have earned the highest praise of both U.S. and South Vietnamese ground-force commanders. Airpower alone could not win for us in Vietnam any more than could land- or seapower alone. But without airpower, the prospects of turning back aggression would be very poor, indeed, if it could be done at all.[91]

Although Brown emphasized improvements in tactical air capabilities, other senior civilians (including the President) and uniformed airmen believed that a strategic air campaign against the North could compel Hanoi to come to terms. President Johnson saw "our bombs as my political resources for negotiating a peace . . . pressuring North Vietnam to stop its aggression against the South."[92] The Johnson administration sought to use airpower to achieve two strategic objectives: "1) to stem the infiltration of men and materiel southward and 2) to make the price of war so high the North Vietnamese will want to go to the conference table."[93]

Civilians and military officers, however, differed greatly on the specifics of how to execute such a campaign, with civilians embracing gradual escalation, strict rules of engagement, target limits, and bombing halts, while military leaders wanted a more traditional air campaign. Curtis LeMay envisioned heavy bombing against a wide range of targets in the North along the lines of VTAP narratives, arguing in 1965 that "the military task confronting us is to make it so expensive for the North Vietnamese that they will stop their aggression against South Viet Nam and Laos. If we make it too expensive for them, they will stop."[94] Secretary of Defense Robert McNamara, although executing a coercive air strategy, was dismissive of "the school of thought in

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[91] Brown, 1966, p. 46.

[92] Quoted in Worden, 1998, p. 166.

[93] J. S. Butz, "Airpower in Vietnam: The High Price of Restraint," *Air Force/Space Digest*, November 1966, p. 41.

[94] LeMay and Kantor, 1965, p. 564.

the Air Force that you could win the war in Vietnam with air power" and complained about the "constant exaggeration of the potential use of air power in Vietnam, with a constant overstatement of the results of air power."[95] Mark Clodfelter argues that little had changed in USAF thinking about strategic air campaigns: "Air Chiefs targeted North Vietnam's economic and military 'vital centers,' in the belief that by destroying the North's war-making capability they would also disrupt its social fabric," a classic VTAP narrative.[96]

By the end of the Vietnam War, the USAF's limited-war narrative was thoroughly muddled. One school of thought was that airpower could not be decisive in such conflicts, but as Secretary Brown noted, it was nevertheless "indispensible." USAF Chief of Staff John McConnell seemed to embrace this perspective in 1967 when he became disillusioned with "both limited war theorists and the performance of airpower."[97] At a press conference that year McConnell admitted that "airpower alone cannot bring the enemy to the conference table, but it has reduced his fighting capability and morale."[98] By the time McConnell retired, however, he had moved to the other, more common USAF narrative that political constraints had prevented the proper use of airpower (i.e., along the lines of the VTAP narrative).[99]

This period illustrates Thornhill's observation that even though each era has a dominant narrative, others continue to have supporters in particular communities or gain prominence in response to world events. Although the PIOP narrative would continue to dominate to the end of the Cold War, the Vietnam experience energized the tactical air warfare community, leading to great improvements in air superiority capabilities (e.g., Red Flag, the F-15 fighter, and effective air-to-air missiles), precision strike, stealth, and battle management, to name a

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95 Quoted in Worden, 1998, pp. 159–160.

96 Clodfelter, 1989, p. 73.

97 Quoted in Worden, 1998, p. 169.

98 Quoted in Worden, 1998, p. 169.

99 Worden, 1998, p. 170.

few.[100] These advances, centered in the fighter force, greatly improved USAF conventional warfare capabilities and set the stage for a return to the Victory Through Air Power narrative—this time primarily using fighters rather than bombers to execute the strategic air campaign.[101]

1991–2003

The rapid and relatively low-cost defeat of the Iraqi military in 1991, in particular the large and visible role that airpower played, led to a reprise of the Victory Through Air Power narrative.[102] The narrative largely held through the 1990s to mid-2003. This period was air-centric in many ways, with airpower relied on to police no-fly zones in Iraq, for coercive purposes in multiple Balkan operations, and to enable a rapid defeat of the Taliban and capture of Baghdad in Operations Enduring Freedom (OEF) and Iraqi Freedom (OIF).

The essence of the new narrative was that with the end of the Cold War, the U.S. Air Force could achieve air dominance against any regional aggressor, and with that dominance conduct parallel attacks against the foundations of enemy political, military, and economic power. With stealth, precision munitions, and great advances in information collection and dissemination, the USAF could conduct these operations in a low-cost, efficient, and decisive manner. Ideally, these capabilities would deter conflict and, that failing, would make it possible to either defeat the adversary immediately, compel an aggressor to relent and withdraw from friendly territory, or, if necessary, make possible rapid and low-cost ground offensive action.

General Michael Dugan, the USAF Chief of Staff, was the first to reintroduce the VTAP narrative. About six weeks after the Iraqi invasion of Kuwait in August 1990 and in the midst of the massive

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[100] For more on advances in American airpower from the Vietnam War through the 1990s, see Lambeth, 2000.

[101] See Worden, 1998, for a history of the "rise of the fighter generals."

[102] The development of the Desert Storm air campaign and related airpower debates are described in Richard T. Reynolds, *Heart of the Storm: The Genesis of the Air Campaign Against Iraq*, Maxwell AFB, Ala.: Air University Press, 1995; and Edward C. Mann III, *Thunder and Lightning: Desert Storm and the Air Power Debates*, Maxwell AFB, Ala.: Air University Press, 1995.

deployment of U.S. force to the Persian Gulf, General Dugan gave an extended interview to reporters accompanying him on a trip to the Middle East. In the interview, Dugan reportedly claimed that the U.S. war plan would seek to decapitate the Iraqi leadership by targeting Saddam Hussein, his family, and military leaders. Dugan said that "air power is the only answer available to our country in this circumstance" and "I don't see us making a big invasion of Kuwait." Finally, although not consistent with the decapitation strategy, but very much in the spirit of Douhet and early airpower theorists, Dugan described the logic of the attack as attempting "to convince his population that he and his regime cannot protect them. If there is a nation that cannot defend its people against these intruding foreigners—protect their lines of communication, their means of production, their cities—that brings a great burden for their ruler."[103] Dugan was fired a few days later by Secretary of Defense Richard Cheney for "poor judgment" in discussing U.S. war plans.[104]

After the war concluded, Colonel John Warden became the most visible proponent of the new VTAP narrative.[105] Warden is described by former USAF historian Richard Hallion as "the most influential and controversial figure in American airpower thought since Billy Mitchell."[106] It would be more accurate to say "since Alexander de Seversky," but either way there is no doubt that Warden became the most "influential and controversial" airpower thinker in recent years. Warden played a unique and important role in the development of the Operation Desert Storm (ODS) air campaign and reinvented the core VTAP ideas (and a bit of ONT and GML as well) in his dual con-

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[103] John M. Broder, "U.S. War Plan in Iraq: 'Decapitate' Leadership: Strategy: The Joint Chiefs Believe That the Best Way to Oust the Iraqis Would Be Air Strikes Designed to Kill Hussein," *Los Angeles Times*, September 16, 1990.

[104] John M. Broder, "Air Force Chief Fired by Cheney: Gen. Dugan Used 'Poor Judgment' in Discussing Possible Iraq Targets, the Defense Secretary Says," *Los Angeles Times*, September 18, 1990.

[105] For an excellent biography of Warden, see John Andreas Olsen, *John Warden and the Renaissance of American Air Power*, Washington, D.C.: Potomac Books, 2007.

[106] Hallion quote from back cover of Olsen, 2007.

cepts of parallel attack and "the enemy as a system." Warden argued that "we must think of the enemy as a system composed of numerous subsystems. Thinking of the enemy in terms of a system gives us a much better chance of forcing or inducing him to make our objectives his objectives and doing so with minimum effort and the maximum chance of success."[107]

Warden's concept envisioned the enemy state as a system with five concentric rings. At the innermost is enemy leadership (e.g., government, communications, security). Moving outward next are organic essentials (e.g., electricity, oil, food, money), infrastructure (e.g., roads airfields, factories), population, and fighting mechanism (military, police, firemen). Although the rings are arrayed from most important inside to less important outside, Warden notes that operational or strategic targets can and should be attacked in parallel.[108] Warden argues the enemy leadership or the system as a whole are the only appropriate targets for strategic warfare. Any attacks on other rings are made only to the extent they influence the thought and behavior of the leadership. In this way, he breaks from aspects of earlier airpower theories that saw attacks on military industry as key to breaking the capacity of the fielded forces, asserting:

> It is imperative to remember that all actions are aimed against the mind of the enemy command or against the enemy system as a whole. Thus, an attack against industry or infrastructure is not primarily conducted because of the effect it might or might not have on fielded forces. Rather, it is undertaken for its direct effect on the enemy system, including its effect on national leaders and commanders. . . .The essence of war is applying pressure against the enemy's innermost strategic ring, its command structure.[109]

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[107] John A. Warden, "The Enemy as a System," *Airpower Journal*, Spring 1995. The idea of parallel attack is best articulated in John A. Warden, "Success in Modern War: A Response to Robert Pape's Bombing to Win," *Security Studies*, Vol. 7, No. 2, 1997, pp. 172–190.

[108] Warden first developed this idea in his 1989 book *The Air Campaign*, then refined it in later writings.

[109] Warden, 1995.

Harkening back to the earliest "Over Not Through" arguments, Warden concludes this passage by noting that "it is pointless to deal with enemy military forces if they can be bypassed by strategy or technology either in defense or offense."[110] Scott West, in his comparison of Warden's ideas with the industrial web theory developed at the Air Corps Tactical School in the 1930s, argues convincingly that Warden's ideas are largely consistent with earlier Air Corps Tactical School writings.[111] David Mets, in a related effort comparing the ideas of Mitchell, Trenchard, and Warden, observes that "almost everything in his writing and speaking has precedents dating all the way back to the 1920s" but that nevertheless Warden's theory of airpower is sufficiently original to deserve careful study.[112] Indeed, one could argue that both it and the Air Corps Tactical School strategic bombing concept represent the natural evolution of ideas first developed by airmen during World War I.[113]

Other Voices

Although John Warden was the airman most consistently and visibly associated with the reprise of VTAP, others played important roles in developing and sustaining this narrative. In particular, Secretary of the Air Force Donald Rice and two key members of his staff—Lieutenant Colonel David Deptula and Dr. Christopher Bowie—presented an airpower narrative in a higher-level strategy document called *Global Reach, Global Power*.[114] This USAF document read more like the White House National Security Strategy or Joint Chiefs of Staff National

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[110] Warden, 1995.

[111] See Scott D. West, *Warden and the Air Corps Tactical School: Déjà Vu?* master's thesis, School for Advanced Air and Space Studies, Maxwell AFB, Ala.: Air University Press, 1999.

[112] David Mets, *The Air Campaign: John Warden and the Classical Airpower Theorists*, Maxwell AFB, Ala.: Air University Press, 1999, p. 79.

[113] For an assessment of the evolution of strategic attack theory from World War II to Operation Allied Force, see David R. Mets and William P. Head, eds., *Plotting a True Course: Reflections on USAF Strategic Attack Theory and Doctrine: The Post–World War II Experience*, Westport, Conn.: Praeger, 2003.

[114] Donald Rice, *The Air Force and U.S. National Security: Global Reach, Global Power*, Washington, D.C.: Headquarters, U.S. Air Force, 1990.

Military Strategy than a service document, describing and illustrating how the USAF had and would contribute to achieving diverse U.S. national security objectives. Secretary Rice's narrative was more about the indispensable nature of airpower in all military operations than a pure VTAP argument.

General Merrill McPeak, USAF Chief of Staff during ODS, also contributed to the USAF public narrative, particularly through his postwar briefing known as "The Mother of All Briefings," a satirical reference to Saddam Hussein's claim that the war would be "The Mother of All Battles." In the briefing, McPeak presented a VTAP narrative, arguing that "This is the first time in history that a full army has been defeated by air power."[115]

David Deptula was also highly active in presenting the VTAP narrative through briefings, speeches, interviews, monographs, and articles.[116] Deptula expanded on and made original contributions to the ideas of parallel attack and effects-based warfare, particularly regarding the relationship between air and surface forces:

> The combination of stealth and precision redefines the concept of mass. Mass, in the sense of an agglomeration of a large number of forces, is no longer required to achieve a devastating effect upon a system of forces, infrastructure, government or industry. No longer do large numbers of surface forces require movement, positioning, and extensive preparation before we can achieve dominant effects over an enemy. Surface forces will always be an essential part of the military, but massing surface forces to overwhelm an enemy is no longer an absolute prerequisite to impose control over the enemy.[117]

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[115] Dan Fesperman, "War Won Early with Air Power, General Says," *Baltimore Sun*, March 16, 1991.

[116] Deptula would go on to become a lieutenant general and deputy chief of staff for intelligence, surveillance, and reconnaissance (ISR), retiring from the USAF in 2010. Deptula is currently dean of the General Billy Mitchell Institute for Aerospace Studies and is arguably the most active and visible American airpower theorist today.

[117] David Deptula, *Effects-Based Operations: Change in the Nature of Warfare*, Arlington, Va.: Air Force Association, 2001, p. 18.

Deptula, based on his experience as the Combined Air Operations Center director for OEF, also helped develop a distinctive twist on the VTAP narrative. This view argued that airpower and special operations forces offered a new kind of military power that could achieve national military objectives without the deployment of large U.S. ground forces or, alternatively, with ground forces acting in a supporting role to air forces. In a 2003 *Air and Space Power Journal* article, Deptula and two co-authors argued for a new category in joint doctrine called direct attack to account for this capability:

> What is direct attack? Broadly stated, [direct attack] consists of air operations conducted to render the adversary's military capabilities ineffective outside an established land area of operations (AO) or when surface forces are operating in a supporting role to air forces. Although this is a working definition, it captures why a new mission category may be of value and how that could change the way we think about, organize, and conduct counterland operations.[118]

General Chuck Horner, the Joint Force Air Component Commander during ODS, also contributed to the public narrative during this period, primarily through interviews, speeches, expert commentary for television (e.g., during Operation Allied Force), and a Desert Storm memoir, *Every Man a Tiger*, co-authored with Tom Clancy. In his oral history with PBS, Horner's comments were very much in line with VTAP, particularly his description of ODS as the first execution of "the concept of air as the main attack versus a supporting attack for ground attack":[119]

> The first night of the war we wanted to seize control of the air first and foremost, and we also wanted to introduce shock into their entire system—that's why we shut down the electrical grids, first

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[118] David A. Deptula, Gary L. Crowder, and George L. Stamper Jr., "Direct Attack: Enhancing Counterland Doctrine and Joint Air-Ground Operations," *Air and Space Power Journal*, Winter 2003.

[119] "Oral History: Charles Horner, The Gulf War," *Frontline*, PBS, January 1996.

> of all it supported hitting the command and control structure, that's why we hit the communications buildings, the sector operation centers, the radars in the airfields, but also we wanted them to feel completely overwhelmed and I think we achieved that.[120]

General Ronald R. Fogleman became USAF chief of staff in October 1994 and served through August 1997. Like most chiefs of staff, Fogleman's speeches covered a wide range of topics and, in his role as CEO, described the many contributions the USAF made to national security. When his speeches focused narrowly on airpower concepts, they were very much in the VTAP school of thought. An example is his 1996 Air Force Association speech "Air Power and the American Way of War," which was clearly influenced by John Warden's thinking. In the speech, Fogleman described his idea of an "asymmetric force strategy":

> Such a strategy seeks to directly attack the enemy's strategic and tactical centers of gravity—something that each of our CINCs defines before beginning to develop warplans for the theater of operation. Once we identify these centers of gravity, we deny the enemy the ability to resist our will by directly striking at those that are crucial to the enemy's ability to achieve its war aims. While they may vary as a function of the enemy, these centers generally include the leadership elite; command and control; internal security mechanisms; war production capability; and one, some or all branches of its armed forces—in short, an enemy's ability to effectively wage war.
>
> This kind of asymmetric force strategy aims to compel or coerce an adversary to do our will through careful planning and the deliberate employment of force to achieve shock and surprise`—the shock and surprise that results from confronting a state with the imminent destruction of its foundations of power by warfighting capabilities that clearly indicate the costs of continuing a conflict will outweigh any conceivable gains. In the end, asym-

[120] "Oral History: Charles Horner, The Gulf War," 1996.

> metric force seeks to compel an adversary to do our will at least cost to the United States in lives and resources.[121]

The VTAP narrative also was developed and sustained through the writings of Benjamin Lambeth, then a senior analyst with the RAND Corporation, and Richard Hallion, who became the Air Force historian during this period. Hallion's 1992 book *Storm over Iraq: Air Power and the Gulf War* told the VTAP narrative through the experience of this conflict. Lambeth's 2000 book *The Transformation of American Air Power* presented a history of airpower from the Vietnam War through the 1990s, arguing that Desert Storm had demonstrated a new American way of war in which the relative roles of air and ground forces had switched.[122] Horner and Deptula had noted this years earlier, but Lambeth expanded and refined the concept into a much richer and accessible narrative.

Finally, Phil Meilinger, a former commandant of the School for Advanced Air and Space Studies and airpower scholar, captured the essence of 1990s airpower thought in his *10 Propositions Regarding Air Power*, published in 1995 by the Air Force History and Museums Program:

1. "Whoever controls the air generally controls the surface.
2. Air Power is an inherently strategic force.
3. Air Power is primarily an offensive weapon.
4. In essence, Air Power is targeting, targeting is intelligence, and intelligence is analyzing the effects of air operations.
5. Air Power produces physical and psychological shock by dominating the fourth dimension—time.
6. Air Power can conduct parallel operations at all levels of war, simultaneously.
7. Precision air weapons have redefined the meaning of mass.

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[121] Ronald R. Fogleman, *Air Power and the American Way of War*, presented at the Air Force Association Air Warfare Symposium, Orlando, Florida, February 15, 1996.

[122] Lambeth's arguments from his 2000 book are updated and expanded in Benjamin S. Lambeth, "Lessons from Modern Warfare: What the Conflicts of the Post–Cold War Years Should Have Taught Us," *Strategic Studies Quarterly*, Fall 2013, pp. 28–72.

8. Air Power's unique characteristics necessitate that it be centrally controlled by airmen.
9. Technology and air power are integrally and synergistically related.
10. Air Power includes not only military assets, but an aerospace industry and commercial aviation."[123]

Warden, Rice, McPeak, Deptula, Horner, Hallion, Lambeth, and Meilinger all presented narratives strongly anchored in the core themes of Over Not Through, Give Me Liberty, and Victory Through Air Power. Although these narratives have endured throughout the history of the institution, they were largely subordinated by the demands of ground-centric conflicts in Iraq and Afghanistan, particularly between 2004 and 2012.

2004–2012

Thornhill's final narrative "We Are Critical Enablers" captures a perspective that many airmen began to embrace as the Iraq occupation morphed into a nasty counterinsurgency campaign:

> During this era, some airmen conceptualized their role as national policy's 'critical enablers' . . . providing persistent intelligence, surveillance and reconnaissance; inter-theater and intra-theater mobility; medical evacuation; space and cyberspace expertise; individual augmentees to support convoys, provincial reconstruction teams, host-nation training, and command staffs; and close air support to the land operations.[124]

This narrative began during General Jumper's tenure as Air Force chief of staff, but from the bottom up, not top down. Thornhill notes that airmen returning from tours in Iraq and Afghanistan "proud of their role as critical enablers, mimicked the 'hooahs' of their Army brethren,

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[123] Phillip S. Meilinger, *10 Propositions Regarding Air Power*, Washington, D.C.: Air Force History and Museums Program, 1995, pp. 1–2.

[124] Thornhill, 2012, p. 7.

reveled in their ground combat skills training, and eagerly sought permission to wear Army patches on their uniforms."[125]

This internal narrative persisted and grew during General Moseley's tour as Air Force chief of staff but wasn't presented publicly by USAF leaders until General Norton "Norty" Schwartz became chief of staff in 2008. Schwartz became chief after Secretary Michael Wynn and Chief of Staff Michael Mosely were fired by Secretary of Defense Robert Gates. Although the ostensible reason for the firings was "a chain of failures" in the handling of USAF nuclear weapons,[126] relations between the Moseley and Gates had been strained over disagreements regarding the size of the F-22 program buy and Gates's perception that the USAF was more concerned with protecting its high-technology programs and fighting future conventional wars than in helping win today's wars.[127] Gates wrote that the USAF "was one of my biggest headaches," had "next-war-itis," and was obsessed with "high-tech air-to-air combat and strategic bombing against major nation states."[128] Gates even singled out Moseley for criticism in one speech lamenting the lack of urgency in the Pentagon about meeting current operational needs in Iraq.[129]

Differing narratives might have contributed to the poor relations between Secretary Gates and General Moseley. General Moseley's writings and speeches as chief exemplify the "chief of staff as CEO" model of narrative, enthusiastically describing the broad and enduring contributions of the USAF to the nation, but his writings also fit naturally alongside Warden, Deptula, and other members of the most recent

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[125] Thornhill, 2012, p. 7.

[126] Ann Scott Tyson and Josh White, "Top Two Air Force Officials Ousted," *Washington Post*, June 6, 2008.

[127] The Moseley-Gates dispute over F-22 numbers is discussed in "Pumping Up the Numbers," *Armed Forces Journal*, April 1, 2008.

[128] Robert Gates, *Duty: Memoirs of a Secretary at War*, New York: Alfred A. Knopf, 2014, pp. 239 and 248; John Tirpak, "Gates Versus the Air Force," *Air Force Magazine*, March 2014.

[129] Noah Shactman, "Robert Gates: Overhaul the Pentagon," *Wired Magazine*, September 21, 2009.

incarnation of VTAP. To the extent that General Moseley was presenting a continuation of VTAP and Secretary Gates wanted something more along the lines of WACE, there was bound to be friction. For example, in 2007 General Moseley wrote:

> 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 systematically 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. . . . The mission of the United States Air Force is "to deliver sovereign options for the defense of the United States and its global interests . . ."[130]

It could be argued that there are elements of ONT and GML in this passage as well, but the tone is most consistent with VTAP. In any event, none of these narratives likely sat well with Secretary Gates.

When General Schwartz became chief of staff, his challenges included restoring faith in the USAF's handling of nuclear weapons, repairing damaged relations with the Secretary of Defense, and rebuilding Air Force morale. Schwartz's first speech to the annual Air Force Association meeting in September 2008 emphasized expanded remotely piloted vehicle operations in Iraq (consistent with Secretary Gates's guidance) and sought to increase respect for that mission within the USAF.[131] Schwartz's speech reportedly drew the ire of the fighter community because some of his comments were seen as a slap at fighter pilots.[132] During his tenure, Schwartz presented narratives that

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[130] Michael T. Moseley, "Airmen and the Art of Strategy," *Strategic Studies Quarterly*, Fall 2007, pp. 15–17.

[131] Some observers consider the establishment of a strong remotely piloted vehicle community in the USAF Schwartz's greatest legacy. See Tom Bowman, "Air Force Chief Leaves Legacy in the Sky: Drones," *Morning Edition*, National Public Radio, August 10, 2012.

[132] Colin Clark, "Divided AF Reacts to Schwartz Speech," *DOD Buzz*, September 22, 2008.

stressed the equality of airmen across all functional areas, the breadth of air force contributions to joint operations, and, in particular, that the USAF was fully committed to winning the current wars. As was the case with previous USAF leaders, General Schwartz spoke publicly on all aspects of the USAF mission, routinely describing the many contributions that the USAF was making to U.S. security more broadly.[133] Nonetheless, he became best known for his "all in" narrative regarding USAF contributions to the conflicts in Iraq and Afghanistan. Schwartz's March 3, 2009, speech to the American Legion captures the essence of the WACE narrative:

> Let there be no doubt—we, in your Air Force, are "all in." . . . Our priority is to partner with the Joint and Coalition team to win today's fight. . . . We are taking every feasible initiative to serve as a trustworthy partner in delivering game-changing capabilities with precision and reliability. Whether it is serving alongside ground forces in convoys or in Joint Terminal Attack Controller roles, or providing game-changing Intelligence, Surveillance and Reconnaissance capabilities with unmanned aerial vehicles, or helping our wounded warriors with life-saving medical care and aeromedical evacuation, or providing rapid and precise strike capabilities in counterinsurgency or close air support roles, hear me loud and clear when I say that we are all in. This is our priority as an Air Force.
>
> And our Airmen know exactly what must be done and how to do it in a way that works for our brothers and sisters in arms. Because, in short, this game is all about trust—and we build that trust in a way that can be summed up with a word: Performance. We will deliver on our promise as a reliable partner, and we will prove our priorities with our performance.[134]

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[133] General Schwartz has also made the case that airpower can be decisive when used independently. See Charles A. Blanchard and Norton A. Schwartz, "Opinion: No Air Force? No Way!" *Aviation Week and Space Technology*, August 25, 2014.

[134] Norton Schwartz, *Pride in Service*, *Heritage*, speech to American Legion 49th Annual Washington Conference, March 3, 2009.

WACE accurately described the USAF's many contributions to the joint fight, and Schwartz made a compelling case in speeches and interviews that the ongoing conflicts were the USAF priority during his tenure. In his American Legion speech, he also repeated a theme he had introduced in 2008 that "no Airman measures his or her worth by their proximity to the fight. Everyone counts, everyone contributes. No job or specialty is more worthy than another because it takes all of us playing our respective positions to be successful."[135] In these comments and his other efforts, Schwartz sought to raise the stature of the remotely piloted vehicle community and, more generally, create greater equality across specialties within the USAF, at least in part to better meet the challenges presented by counterinsurgency and counterterror operations. That said, this narrative was firmly rejected by many airmen (particularly in the fighter and bomber communities) and has lost some urgency as the conflicts in Iraq and Afghanistan have wound down. In an attempt to build consensus and update the USAF narrative for internal and external audiences, General Schwartz sponsored a rewrite of the 20-year-old *Global Reach, Global Power* document, but the project had just started during his last year, and the final product is more properly viewed as reflective of the next chief's views.

2013–2014

With the end of OIF and drawdown of U.S. forces in Afghanistan, Secretary of the Air Force Deborah James and Chief of Staff General Mark Welsh appear to be embarked on a reset of the USAF public narrative. It is not yet clear what this narrative should be called, perhaps "Innovative Airmen Go Over Not Through Problems," "Strategic Agility Through Air Power," or "Air Power Gives the Nation Global Vigilance, Global Reach, and Global Power." All three themes are found in new USAF documents and speeches.

Recent documents and speeches have shifted from a focus on support to ground operations in counterinsurgency to a more balanced presentation encompassing the full range of USAF capabilities and

[135] Schwartz, 2009.

missions. The USAF 2013 vision emphasizes the history of airmen as innovators who go "over not through" problems:

> The story of the Air Force is a story of innovation. Airmen, using their unique perspective, have long stood for and pioneered innovative ways to win the fight while shaping the future. Airmen characteristically view security challenges differently—globally, without boundaries. Whereas pre-Kitty Hawk warriors relied on breaking through fortified lines on the ground, Airmen have always sought to go over, not through, those fortifications, to achieve victory. By recruiting innovative people and making them Airmen, we capitalize on their inherent creativity to find better and smarter ways to approach and solve our Nation's security challenges. Now, more than ever, we need bold leaders at every level who encourage innovation, embrace new thinking, and take prudent risks to achieve mission success.[136]

The "over not through" and innovation themes are reinforced in the 2013 publication *Global Vigilance, Global Reach, Global Power for America*. Like the *Global Reach, Global Power* report of the 1990s, this document is a more comprehensive presentation of how USAF core missions (air and space superiority, ISR, rapid global mobility, global strike, and command and control) contribute to the defense of the nation. The bulk of the document describes these core missions, but it also includes chapters on "The Enduring Importance of Airpower," "The Power of Airmen," and "America's Asymmetric Advantage." *GV/GR/GP* closes with the argument that airmen exploiting technology in the spirit of "Over Not Through" offer the nation an asymmetrical advantage over opponents.[137]

A final contribution to the emerging USAF public narrative is the new USAF 30-year strategy titled *America's Air Force: A Call to the Future*. In the words of General Welsh, this document complements the USAF vision and *GV/GR/GP*:

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[136] U.S. Air Force, *The World's Greatest Air Force Powered by Airmen, Fueled by Innovation: A Vision for the United States Air Force*, Washington, D.C., January 10, 2013b, p. 4.

[137] USAF, 2013b, p. 12.

> Building upon "who we are" and "what we do," this *Strategy* provides a general path of "where we need to go" to ensure our Air Force meets the needs of our great Nation over the next 30 years. This is an aspirational document, providing an "over the horizon" sight picture and delivering strategic vectors that describe how the Air Force needs to look and act as we move towards a dynamic future.[138] (italics in original)

America's Air Force is a long-term strategy for institutional change, primarily directed at internal and specialist audiences. It does, however, introduce themes such as strategic agility that may be incorporated into future USAF public narratives. *America's Air Force* highlights rapid change as a reality that the USAF cannot ignore, arguing that to prevail the USAF must adapt more quickly than adversaries and that, therefore, the USAF must become an institution characterized by strategic agility.[139]

A related theme found in both *America's Air Force* and *GV/GR/GP* argues that "Today's Air Force is an indispensable hedge against the challenges of an uncertain and dangerous future."[140] This argument harkens back to Air Force Secretary Brown's comments during the Vietnam War that although airpower may not be able to win the conflict on its own, it was indispensable to victory.

USAF Colonel Jeffrey Smith makes a case for a new narrative along these lines in his 2014 book *Tomorrow's Air Force: Tracing the Past, Shaping the Future*. For Smith, the USAF is "suffering from an identify crisis centered on the adolescent perspective of independence." Smith's narrative might be termed "You can't leave home without us," a slogan that General Robert Rutherford was fond of using when he led Air Mobility Command.[141] Smith explains the logic:

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[138] U.S. Air Force, *America's Air Force: A Call to the Future*, Washington, D.C., July 2014, p. 5.

[139] USAF, 2014, p. 8.

[140] U.S. Air Force, *Global Vigilance, Global Reach, Global Power for America*, Washington, D.C., 2013a, p. 15.

[141] Amber R. Kelly-Herard, "Mobility Leaders Pay Tribute to a Former Air Mobility Commander," Air Mobility Command website, July 11, 2013.

> In fact, it is the realization of 'dependence' that will propel the USAF in terms of credibility and relevance. The message for the service is that airpower is necessary in nearly all contexts . . . from humanitarian to total war. All of these contexts require the attributes that airpower brings, and therefore nearly all engagements are *dependent* on airpower . . . there is no conceivable context where U.S. military operations could succeed without the prerequisite of airpower control. . . . Given airpower dominance (air, space, cyber), all services can provide their important and core capabilities synergistically. In other words, airpower is *necessary*, and most operations are dependent upon airpower's capabilities . . . but this fact does not mean that air power is *sufficient*. This simply suggests the importance of describing national security operations within the profession of arms as *dependent on airpower* over the more fractured argument regarding the independence of airpower. . . . The idea of 'dependence' rather than independence is significant and cannot be understated. It should and must define airpower's capability and ultimately its identity. (italics in original)[142]

Smith is not arguing for a narrative that places the USAF in purely a supporting role, but one that recognizes airpower as the foundation for effective joint operations. *GV/GR/GP* devotes considerable space to documenting airpower's indispensability but may not make the point as sharply as Smith envisions. On the other hand, Smith seems to downplay the USAF's ability to conduct independent operations. One slight adjustment to his narrative might seek a middle ground regarding independence, neither rejecting independent operations nor claiming that airpower can be independently decisive. RAND colleague Adam Grissom has coined the phrase "limited liability air campaigns" to describe a type of independent air operation that American presidents have ordered on numerous occasions. Presidents have looked to airpower not because it would necessarily be decisive in achieving all U.S. objectives but rather because it was viewed as a means to rapidly change battlefield and crisis dynamics at low cost and risk, buying

[142] Jeffrey J. Smith, *Tomorrow's Air Force: Tracing the Past, Shaping the Future*, Bloomington, Ind.: Indiana University Press, 2014, p. 227.

time to pursue other military or diplomatic options. This is particularly important in situations where U.S. interests are not sufficiently engaged to justify high-risk, high-cost military actions.

Crafting a Compelling Narrative

This chapter has explored USAF public narratives spanning a century of airpower—from those developed when airmen flew cloth-covered, open-cockpit biplanes to today's airmen seeking to integrate effects across cyber, space, and air domains in a global battlespace. Although these narratives were created to address vastly different problems, most have endured because they have featured elements essential to compelling narrative. As noted at the beginning of this chapter, an effective airpower narrative must present a problem, offer a plausible means to resolve the problem, and describe the desired end state. The ONT, VTAP, PIOP, and VTAP reprise narratives all contained these elements. Each

- described a vexing problem that the public cared about.
- offered a bold (but plausible) new idea as a solution.
- emphasized innovative uses of technology.
- offered an aspirational and hopeful vision of the future.

Table 3.1 presents three of the narratives in matrix form to illustrate their structure. For example, at the beginning of the Cold War, airmen spoke to a pair of vexing problems that both the public and national leaders were deeply worried about: Soviet conventional land force superiority in Europe threatening free nations in Western Europe and Soviet nuclear forces putting the American homeland at great risk. In response, airmen created the "Peace Is Our Profession" narrative. PIOP made the case that USAF strategic nuclear forces could solve this problem in two ways. First, the United States threatened to respond to any attack on European allies with nuclear strikes on the Soviet homeland, freeing NATO from the unaffordable task of countering the huge Soviet Army symmetrically with ground forces. Second, SAC

Table 3.1
Characteristics of Strong USAF Narratives

USAF Public Narrative	Vexing Problem	Bold New Idea as Solution	Emphasis on Technology and Innovation	Aspirational Vision
Over Not Through	Slaughter and stalemate of trench warfare	Airpower strikes directly at capacity and will of enemy to fight	Long-range bombers, precision daylight bombing	Reduce cost of wars and unite world through air transport
Peace Is Our Profession	Soviet conventional and nuclear forces threaten vital U.S. interests	Strategic nuclear forces create desirable stalemate in Europe and deter attack on U.S. homeland	Long-range jet bombers, aerial refueling, nuclear weapons	Deter war, enjoy prolonged peace
Victory Through Airpower (reprise)	Defeat regional aggressor without excessive casualties	Paralyze enemy through parallel attacks on strategic and tactical targets	Stealth, precision	Maintain stability in critical regions
Notional future narrative	What national problem will USAF solve?	What big idea will USAF offer to solve problem?	What technological advances are required?	What hope does narrative offer Americans for future?

SOURCE: RAND.

developed alert concepts and capabilities that ensured a significant element of the bomber force could survive even a surprise attack and respond with massive retaliatory strikes against Soviet population centers, industry, and military forces. A key component of this capability was an elaborate early warning and command, control, and communication system that could detect an attack, reach the President, launch the alert force, and transmit presidential orders to all forces within minutes. This capability was greatly enhanced by the creation of the nuclear triad consisting of bombers, ICBMs in hardened silos, and ballistic missile submarines on patrol at sea. Thus, the twin Soviet threats were countered in an affordable way by creating a desirable stalemate in Europe. The USAF narrative emphasized several new technologies and capabilities: nuclear weapons in large numbers, a long-range force of jet

powered bombers, command and control/alert systems and historically unprecedented readiness levels (that would enable forces to survive and retaliate), and aerial refueling aircraft to support intercontinental range missions. Finally, the vision held out the promise that another world war could be avoided and that nuclear weapon use be deterred in a way that would not bankrupt the United States.

Table 3.1 offers the USAF a means to evaluate prospective narratives. It is based on lessons drawn from the service's own narrative history as well as the keen insights that Samuel Huntington offered the Navy in the 1950s. Specifically, a strong narrative should have clear answers to the following questions: What national problem is the USAF offering to solve? What big idea is the USAF offering to solve that problem? What technological advances will the solution take advantage of or require? What hope does the narrative offer Americans for the future?

There are a variety of possible answers. Those that come most naturally to airmen will likely be attractive within the institution and may have great value for internal purposes (e.g., education, inspiration). It is much harder, however, to develop a compelling public narrative. To do that, one must move from looking at the world through the airman's sight picture (as we have done in this chapter) to one that begins with public attitudes and perceptions.

One way to make that shift in perspective is to consider the findings from public opinion polls taken by organizations like Gallup. Over the past 80 years, polling organizations have conducted more than 50 polls exploring popular attitudes toward the Air Force, sister services, and ongoing operations. This is a treasure trove of information that can be mined for insights on popular attitudes at particular points of time and, more importantly, allows trends to be seen not just over years, but over many decades. The next chapter describes and analyzes the results from these surveys within and across the narrative periods, seeking to identify both where public attitudes are enduring and where and how they have changed.

CHAPTER FOUR

Public Attitudes Toward the U.S. Air Force, 1935–2014

This chapter traces the evolution of American public attitudes toward the Air Force from 1935 to 2014. This analysis is primarily qualitative, although informed by polling data from more than 50 opinion surveys conducted over the past 80 years. It is qualitative in that it seeks to understand the survey results in the context of USAF narratives, social currency, contemporary operations, and broader strategy discussions, rather than using statistical techniques to explore, for example, the relationship between social science variables (e.g., gender, age, education, income, veteran status, ethnicity) and attitudes toward the USAF.[1] A more formal study along those lines would be quite valuable, particularly if supported by new surveys that asked respondents follow-up questions about the reasoning behind their service preferences. Finally, this analysis does not attempt to measure whether changes in the USAF public narrative are statistically related to changes in public opinion or USAF budget share. There are three reasons why such an analysis was not attempted: (1) USAF public narratives have not varied greatly over time on quantifiable dimensions, (2) service preference data are not

[1] With the exception of the RAND American Life Panel survey and a 2014 Gallup poll discussed toward the end of this chapter, all survey data came from the Roper Center for Public Opinion Research at the University of Connecticut. The data provided summary information, including sample size, but did not include information on sampling error and confidence interval. Gallup polls are weighted and conducted at the 95 percent confidence level with sampling errors +/– 3 to 5 percent. In this analysis, when survey results are within a 5 percent margin of error, they will be treated as statistically equivalent.

consistently available for these years, and (3) service budget share has varied little between 1960 and 2014.

This analysis is structured around the narrative eras presented in Chapter Two. It will present and discuss survey results for each era, then consider some long-term trends and cross-era issues.

1935–1940

This period covers the "Over Not Through" and "Give Me Liberty" narratives.

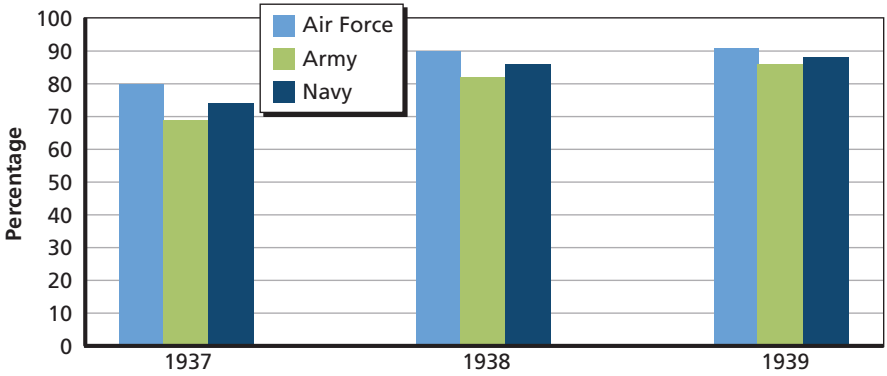
Although there is much evidence of public enthusiasm for aviators and aviation during World War I and the early interwar years, there are no survey data for 1917 to 1934. In 1935, Gallup began to conduct surveys using modern sampling techniques, and from the start it asked many military-related questions. Between 1935 and 1939, Gallup asked a series of similar questions about the potential expansion of the Army, Navy, and Air Force.[2] The use of "air force" is interesting because there was no independent air force in those years, only the U.S. Army Air Corps and aviation elements in the Navy and Marine Corps. Gallup likely was reflecting a common view of the Army Air Corps as the nation's air force.

The first question, asked in 1935, was "Do you think that army, navy, air force appropriations . . . should be greater, smaller, or about the same as they are now?" Roughly half the respondents supported increased spending on the Army (54 percent) and Navy (48 percent), but nearly three-quarters of respondents supported more spending on the air force (74 percent).

During the late 1930s, public support for a larger military increased dramatically. Figure 4.1 shows the results of three surveys

[2] Gallup did not treat the Marine Corps as a "major branch" of the military in most polls conducted between 1935 and 2000. We found only two polls (one in 1947 and one in 1955) that explicitly asked about the Marine Corps. Both of these were regarding which service parents would want a child to enlist in. As late as 1998, Gallup polls asked "about the three major branches of the military, the Army, the Air Force and the Navy." See, for example, the November 20–22, 1998, poll regarding raising taxes to support a larger military.

Figure 4.1
Percentage of Respondents Supporting Expansion of Military Service Branches



SOURCE: RAND chart based on Gallup data. Surveys conducted by Gallup Organization on December 30, 1937–January 4, 1938; November 24–29, 1938; September 24–29, 1939. All polls based on personal interviews with a national adult sample of 1,500. Data provided by the Roper Center for Public Opinion Research, University of Connecticut.

RAND *RR1044-4.1*

conducted in 1937, 1938, and 1939. In each case, respondents were asked to answer separately about whether the Army, Navy, or air force should be expanded. Respondents were not forced to choose among the services.

- "Should the United States build a bigger army, navy, air force?" (1937)
- "Should the United States enlarge the army, navy, air force?" (1938)
- "Do you think the United States should increase the size of the army, navy, air force?" (1939)

As Figure 4.1 illustrates, a strong majority of the public supported expanding all the services in 1937, and this grew to a remarkable ~90 percent level of support by 1939. The air force lost some of the lead that it had in 1935 but remained ahead of the other services; by 1937, the Army and Navy were essentially tied. By 1938, the Navy and air force

were within the poll margin of error of one another, as were the Army and Navy. By 1939, the services were all within the margin of error.[3] As noted above, these polls did not ask the respondents to choose among the services, so the polls are only useful in documenting the growth in public support for increasing every service's budget. To better capture how the public viewed the air force in comparison to the other services, survey questions must force choices—which Gallup began to do in 1941.

1941–1945

This next period captures American attitudes during World War II. This period corresponds with the "Victory Through Air Power" narrative. Gallup asked two similar questions regarding resource-allocation choices among the services during the war (in June 1941 and October 1942), as can be seen in Figure 4.2.

- "From what you have read, which of our armed services needs strengthening most at the present time—our Air Force, Army or Navy?" (1941)
- "If there is a shortage of raw materials for manufacture of War goods, which branch of the service do you think should have first claim on materials—the Army, Navy or Air Force?" (1942)

Gallup also polled the public in 1942 and 1943 on the question of an independent air force. The issue—which had dominated discussion of airpower in the early 1920s—was not a priority in the midst of a global war, with only 44 percent of respondents saying that they had read or heard of the discussion.[4]

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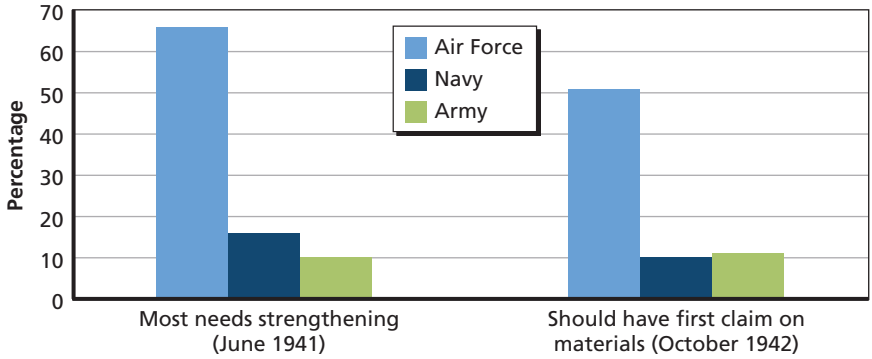
[3] As noted earlier, Gallup polls have sampling errors between +/– 3 to 5 percent. Since we don't have sampling error data for these polls, we are treating any results within 5 percent as statistically equivalent.

[4] Gallup survey, August 15–20, 1942. National adult sample of 1,500. Data from the Roper Center for Public Opinion Research, University of Connecticut.

Figure 4.2
U.S. Public Sees U.S. Airpower as Having First Claim on Resources



SOURCE: RAND chart based on Gallup data. Conducted by Gallup Organization on June 9–14, 1941; October 1–6, 1942; and February 15–20, 1946. All polls based on personal interviews with a national adult sample of 1,500. Sample size is approximate. Data provided by the Roper Center for Public Opinion Research, University of Connecticut.

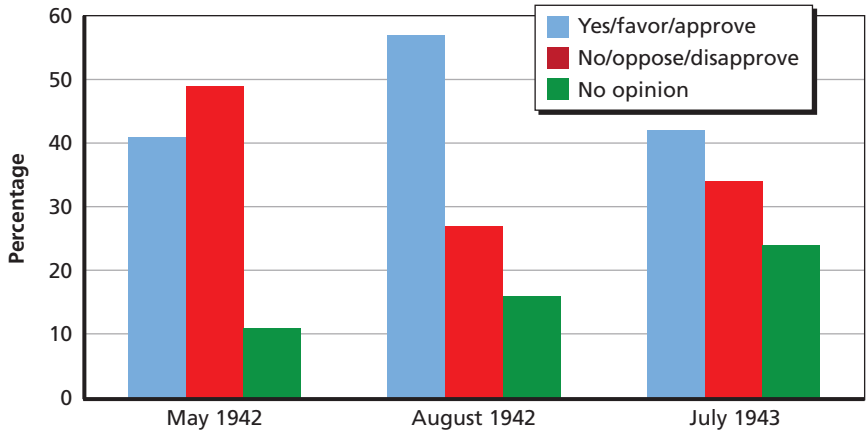
RAND *RR1044-4.2*

Gallup asked similar but not identical questions about independence in three surveys:

- "Do you think the air force should be made a separate branch of our armed forces?" (May 1942)
- "Do you favor or oppose the idea of a separate air force (coequal with the army and navy)?" (August 1942)
- "Would you approve or disapprove of a separate air force for the United States?" (July 1943)

As can be seen in Figure 4.3, a plurality of the public opposed the idea in the first poll, a majority supported independence in the second poll, and a plurality supported it in the last poll. The only consistent trend was the increase in those with no opinion. This volatility may reflect the impact of wartime events, different wording in the polls, or some randomness that would be expected if the question had low salience for the public. It is interesting that support for independence was highest when the poll explicitly noted that a separate air force

Figure 4.3
U.S. Public Support for Independent Air Force, 1942–1943



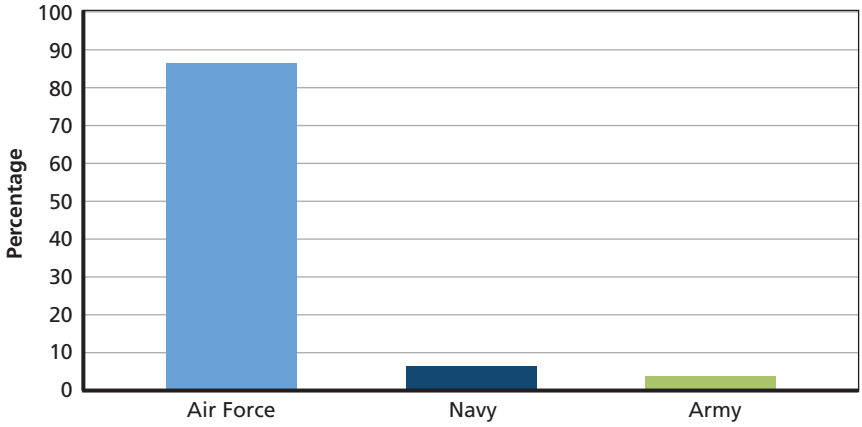
SOURCE: RAND chart based on Gallup data. Data provided by the Roper Center for Public Opinion Research, University of Connecticut.
RAND *RR1044-4.3*

would be "coequal with the army and navy." This wording may have helped clarify the issue for the respondents or simply be coincidence.

1946–1990

This period corresponds with the "Peace Is Our Profession" narrative. As noted in the previous chapter, although PIOP as a slogan did not appear until the 1950s, its seeds were clearly planted in "Air Power Is Peace Power" themes of the late 1940s. Public and elite opinion were strongly aligned in their mutual recognition of the threat of long-range bombers armed with nuclear weapons. A Gallup 1946 poll asked the fundamental question: "With which branch of military forces do you think a foreign country could do the U.S. the most harm if they attacked us—a particularly strong Army, strong Navy or strong Air Force?" The results in Figure 4.4 speak to the strong association the public made between air force bombers and nuclear attack. Although

Figure 4.4
"Which Enemy Military Service Is Most Dangerous to the United States?"



SOURCE: RAND chart based on Gallup survey, February 15–20, 1946. Data provided by the Roper Center for Public Opinion Research, University of Connecticut.
RAND *RR1044-4.4*

the United States enjoyed a nuclear monopoly in 1946, few apparently believed it would last.

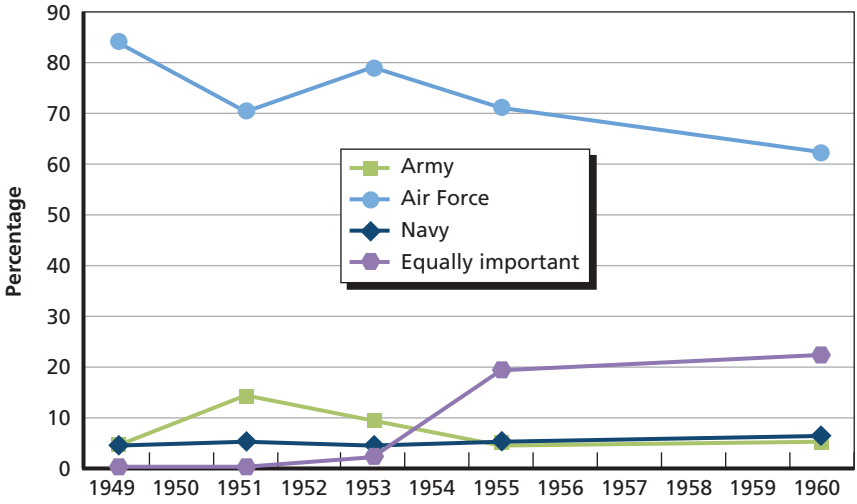
The Early Cold War

In 1949, Gallup began a series of polls that are particularly helpful in tracking public preferences for the services. In these surveys, respondents were asked which service would be "most important" in the event of another major war. The questions varied some in specific wording, but all were focused on the theme of major conflict. Figure 4.5 shows how responses to these questions changed from 1949 to 1960.

The questions are listed below; the phrases that changed are italicized:

- "If the United States should get into *another World War*, which branch of the Armed Forces do you think would play the most important part *in winning the war*—the Army, the Navy or the Air Force?" (1949)

Figure 4.5
U.S. Public Opinion on "Most Important Branch of the Armed Forces"



SOURCE: RAND chart based on Gallup data. Gallup polls, July 2–7, 1949; August 3–8, 1951; October 9–14, 1953; March 3–8, 1955; October 18–23, 1960. "Equally important" response in 1960 was volunteered. Data provided by the Roper Center for Public Opinion Research, University of Connecticut.

RAND *RR1044-4.5*

- "If the United States should get into *World War III*, which branch of the Armed Forces do you think would play the most important part—the Army, the Navy or the Air Force?" (1951)
- "If the United States should get into *another World War*, which branch of the Armed Forces do you think would play the most important part—the Army, the Navy or the Air Force?" (1953)
- "In the event of *another war*, which branch of the Armed Forces do you think will be most important—the Army, the Navy, or the Air Force?" (1955)
- "In the event of *another World War*, which branch of the Armed Forces do you think will be most important—the Army, the Navy or the Air Force?" (1960)

In July 1949, 84 percent of the respondents selected the Air Force as "most important," with the other services scoring in the single digits, reflecting the early Cold War view that air-delivered nuclear weapons were and would continue to be the dominant military instrument. It also is possible that the phrase "winning the war"—which appears only in this one poll—brought to mind the role that Air Force–delivered nuclear weapons played in ending the war with Japan four years earlier. Although later scholarship[5] would challenge the view that the atomic bomb was the sole cause of the Japanese surrender, in 1949 this was the common view. It would be interesting if Gallup had redone this poll after President Truman's announcement on September 23 that the Soviet Union had tested an atomic bomb.[6] Would the Soviet test have undermined or reinforced the centrality of airpower in the public mind? One of the six *New York Times* front-page stories on the test noted that "our absolute dominance in new weapons has virtually ended."[7] This news would likely have influenced those members of the public who associated the importance of the Air Force with an American nuclear monopoly. Subsequent polls suggest that most Americans saw the Air Force playing a central role in U.S. military strategy, whether or not other countries possessed nuclear weapons. Although the Air Force did experience some erosion in surveys conducted during the 1950s, it nevertheless typically polled ten times higher than the other services. This suggests that the end of the nuclear monopoly had a marginal impact on public views of the services relative to one another.

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5 See, for example, Pape, 1993, pp. 154–201.

6 Gallup did ask two poll questions (between October 30 and November 4, 1949) regarding the Soviet test. The first question asked, "Now that Russia has the atom bomb, do you think another war is more likely or less likely?" 45 percent of respondents said more likely, 28 percent said less likely. The second question asked, "Do you think scientists will be able to develop any defense against the atom bomb within, say the next 10 years?" 60 percent said yes, 19 percent said no. Neither directly speaks to the role of airpower following the Soviet test. See George H. Gallup, *The Gallup Poll: Public Opinion 1935–1971*, Westport, Conn.: Greenwood Publishing Group, 1972, pp. 869–870.

7 Anthony Leviero, "U.S. Reaction Firm: President Does Not Say Soviet Union Has an Atomic Bomb: Picks Words Carefully: But He Implies Our Absolute Dominance in New Weapons Has Virtually Ended," *New York Times*, September 24, 1949, p. 1.

In any event, the next poll was not until August 1951, over a year into the Korean War. This 1951 poll most likely reflects a public focus on the ground war there rather than more abstract concerns about the Soviet nuclear weapons program. The Korean War appears to have caused about a 10 percent swing in favor of the Army and a corresponding drop for the Air Force. The next poll in 1953 saw a rebound for the Air Force and a drop for the Army, most likely caused by public frustration with the stalemate in ground operations and weariness after three years of war, particularly since there appeared to be no decisive military option to end the conflict. Whether the increase in those who chose the Army as the most important branch was caused by the Korean War or some other factor, the bounce did not last. By 1955, the Army was back to 4 percent in the polls, the same standing it had in 1949.

The most dramatic change from 1953 to 1960 was the significant increase in those who saw the services as equally important, accounting for all but 2 percent of the 17 percent drop in those choosing the Air Force. The Air Force, however, remained the dominant service, with 62 percent selecting it in 1960 and the other services polling in the single digits. The drop may have been a natural "reversion to the mean" following what could be seen as an unsustainable period of airpower enthusiasm that placed unrealistic expectations on airpower. The Korean War likely contributed to this shift since airpower did not produce a decisive victory, but since no other service did any better, the former Air Force votes shifted to "equally important" rather than to another service. It also is possible that the decline from 1955 to 1960 reflects the pessimism and overall dark mood that followed the launch of Sputnik in 1957. Finally, as noted in Chapter Two, historians identified the mid-1950s as that period when popular culture began to explore darker themes associated with nuclear weapons, Strategic Air Command, and the Cold War more broadly. These factors likely combined to produce the shift in public opinion away from the view that the Air Force was uniquely important to U.S. national security.

Unfortunately, Gallup did not continue its "most important service" poll. Indeed, it waited 41 years before a similar series of questions was asked.

Support for Air Strikes During the Vietnam War

American involvement in the war in Southeast Asia spanned more than a decade, saw peak deployments of over 500,000 troops, involved an exceptionally wide range of military missions, and was conducted in four countries. Given the scale and length of the conflict and the bitter divisions within the United States over its purpose and execution, it is odd that there was relatively little detailed public opinion polling about the conflict. Gallup did conduct surveys throughout the conflict measuring public support for the war effort, but none exploring public attitudes toward the individual services or the relative value of air, ground, and sea power.

The only measure of public attitudes toward the USAF is an indirect one regarding support for the bombing of North Vietnam. In his seminal work on public support for the Vietnam War, John Mueller compiled Gallup data from 1965 to 1968 and arrayed questions about the bombing of North Vietnam on a binary "favored bombing"/"opposed bombing" scale.[8] As illustrated in Figure 4.6, support for bombing varied greatly, beginning at 30 percent, then rising to over 80 percent in 1966 and declining below 30 percent by 1968. These changes in public opinion do not appear to be reactions to major battles or other events in Vietnam; nor were they the result of independent public assessments of the utility of bombing or even channeling of expert opinion on bombing effectiveness.[9] Rather, they appear to be driven by prospective or actual changes in U.S. policy. In 1965, prior to attacks on Hanoi and Haiphong, the public supported the administration's restraint and opposed bombing. Once President Johnson began bombing targets in the Hanoi area in 1966, the public was asked essentially the same question, with the "favor bombing" answer leaping by 50 percentage points. Similarly support was weak for bombing halts

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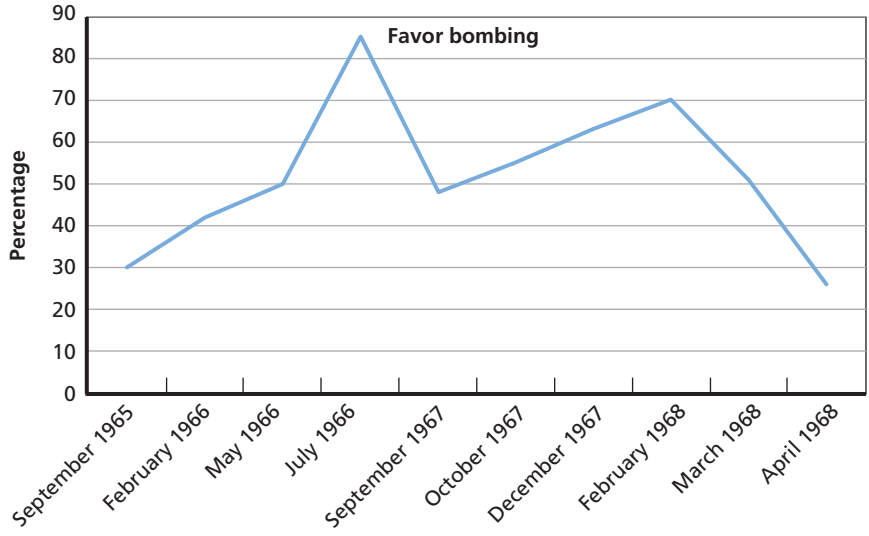
[8] John E. Mueller, "Trends in Popular Support for the Wars in Korea and Vietnam," *American Political Science Review*, Vol. 65, No. 2, June 1971, pp. 358–375. See also Philip E. Converse and Howard Schuman, "'Silent Majorities' and the Vietnam War," *Scientific American*, Vol. 222, No. 6, June 1970, pp. 17–25.

[9] The classic critique of U.S. air strategy in Vietnam is Mark Clodfelter, *The Limits of Air Power: The American Bombing of North Vietnam*, New York: Free Press, 1989.

Figure 4.6
U.S. Public Support for the Bombing of North Vietnam, 1965–1968



SOURCE: RAND chart based on Mueller, 1971, pp. 358–375.
RAND *RR1044-4.6*

until they became administration policy—as can be seen by the drop in support for bombing in the spring of 1968.

Mueller notes that those who support national leaders tend "to reject proposals for escalation and de-escalation in the abstract since they imply an alteration of 'our' present course, but once the President has adopted the new policy many in the group will follow his lead."[10] Mueller's research illustrates one type of elite cueing, in which party leader position influences the opinions of partisan followers.[11] Another type of elite cueing is driven by the appearance of consensus (or lack thereof) on a policy issue. This body of research argues that the more

[10] Mueller, 1971, p. 369. For more on presidents and public opinion, see Richard Brody, *Assessing the President: The Media, Elite Opinion, and Public Support*, Stanford, Calif.: Stanford University Press, 1992.

[11] For more on elite cueing, see John R. Zaller, *The Nature and Origins of Mass Opinion*, Cambridge, U.K.: Cambridge University Press, 1992.

elites appear to be united, the greater the public support. When elites appear to be divided, the public is less inclined to support the policy.[12]

In addition to Mueller's analysis of attitudes during the Johnson administration, we also found multiple Gallup surveys conducted during the Nixon administration. The first of these took place within a few days of Richard Nixon's inauguration on January 20, 1969. The poll, running from January 23 to the 28, asked "In view of the developments since we entered the fighting in Vietnam, do you think the U.S. made a mistake sending troops to fight in Vietnam?" 52 percent said yes, 39 percent no, and 9 percent had no opinion. Gallup had been running this survey since 1965, when there was strong support for the war (only 24 percent said it was a mistake). But since 1965, each poll found a greater percentage who saw the war as a mistake. The August 1968 poll was the first in which a majority (53 percent) said the war was a mistake. Thus, when Nixon became President, it was clear that public support for the war was low; by May 1971, 61 percent of respondents said the war was a mistake.

These broader attitudes toward the war provide important context for the polls taken in 1972 during the North Vietnamese "Easter Offensive."[13] President Nixon ordered a major air effort to counter the North Vietnamese offensive. This effort ran from the end of March almost to the end of October. In addition to the continued strikes by tactical aircraft, President Nixon also ordered a coercive bombing campaign using B-52s against North Vietnamese targets throughout May (Linebacker I). The first survey, conducted in April (one month before the Linebacker I bombing campaign), asked "Do you favor or oppose the stepped-up bombing of North Vietnam?" It found a split public, with 45 percent favoring, 45 percent opposing, and 11 percent with no opinion. The second survey, conducted in September (roughly three months after Linebacker I began and one month before its end), asked a slightly different question: "Do you approve or disapprove of the

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[12] See Eric V. Larson and Bogdan Savych, *American Public Support for U.S. Military Operations from Mogadishu to Baghdad*, Santa Monica, Calif.: RAND Corporation, MG-231-A, 2005.

[13] For details on the U.S. air response, see Clodfelter, 1989, pp. 151–163.

bombing of North Vietnam?" The results were nearly identical, with 41 percent approving, 45 percent disapproving, and 11 percent with no opinion.[14]

Unfortunately, the Gallup questions were not intended to explore public attitudes toward the relative effectiveness of air strikes against the North versus other policy options (expanding the conflict into Cambodia or Laos, mining harbors, etc.). Unlike polling during Operations Desert Storm and Allied Force (which will be discussed shortly), the surveys did not ask what airpower might accomplish independently or whether other instruments of power would ultimately be needed. The airpower only question was, in any event, moot by 1965, when large ground forces were deployed to Vietnam. In sum, the limited Vietnam War survey data do not give us any insights into public preferences toward the services.

Support for Air Strikes During U.S. Peacekeeping Operations in Lebanon (1983)

The United States sent U.S. Marines into Lebanon as part of a multinational peacekeeping force that was initially intended to oversee the withdrawal of Palestine Liberation Organization and Syrian troops from Beirut. The mission was, however, poorly defined, and the United States—rather than being a neutral party—overtly supported the pro-Israel Lebanese government, including naval gunfire support from the U.S.S. *New Jersey* and other ships. This led to attacks on American forces, including the October 23, 1983, suicide bombing of the Marine Corps barracks that killed 241 U.S. troops. As the conflict escalated, President Reagan ordered a naval air strike (on December 4) on three Syrian military sites east of Beirut that resulted in the loss of two U.S. aircraft.[15]

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[14] Gallup national adult sample of 1,556 conducted April 21–24, 1972, and Gallup national adult sample of 1,505 conducted September 22–25, 1972. Data provided by the Roper Center for Public Opinion Research, University of Connecticut.

[15] Micah Zenko, "When America Attacked Syria," Council on Foreign Relations, February 13, 2012; Bernard Trainor, "'83 Strike on Lebanon: Hard Lessons for U.S., *New York Times*, August 6, 1989; and David Wills, *The First War on Terrorism: Counter-Terrorism*

The confused mission and terrible loss of life in the Marine Corps barracks bombing was viewed negatively by the American public, but it is not clear whether the badly executed strikes further eroded support. Following the air strikes, a December 8 Harris poll asked, "Do you feel that in the case of Lebanon the loss of American lives has been worth it?" 67 percent responded "Not worth it," while only 24 percent responded "Worth it."[16] Yet, in a parallel Gallup survey that asked "Do you approve or disapprove of these U.S. air strikes against Syrian artillery positions (in retaliation for their shelling U.S. Marine positions in Lebanon)?" a majority supported the air operations. Of those who had heard or read about the strikes, 64 percent approved and 28 percent disapproved.[17] As noted in the discussion of the Vietnam air campaign and as will be seen below, the public typically supports air strikes when ordered by the President, although they often are skeptical about the prospects for success. For example, a February 1984 Harris poll asked about some new policies announced by President Reagan, including "Have the U.S. fleet off Lebanon and U.S. planes bombard Syrian military installations in Lebanon to keep Syria from controlling the fighting in Beirut." 49 percent said it was "Not likely to work," while 37 percent said it was "Likely to work."[18]

Support for Air Strikes During Operation Eldorado Canyon

Operation Eldorado Canyon (OEC) was launched at 0200 April 15, 1986 (Libyan time), after a series of Libyan provocations, culminating in the terrorist bombing of the La Belle discotheque in West Berlin and the death of several U.S. service members.[19] In retaliation, just under

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Policy During the Reagan Administration, Lanham, Md.: Rowman and Littlefield Publishers, 2003.

16 Louis Harris and Associates, December 8–12, 1983. National adult sample of 1,249. Data provided by the Roper Center for Public Opinion Research, University of Connecticut.

17 Gallup, December 9–12, 1983. National adult sample of 1,510. Data provided by the Roper Center for Public Opinion Research, University of Connecticut.

18 Louis Harris and Associates, February 9–11, 1984. National adult sample of 1,262. Data provided by the Roper Center for Public Opinion Research, University of Connecticut

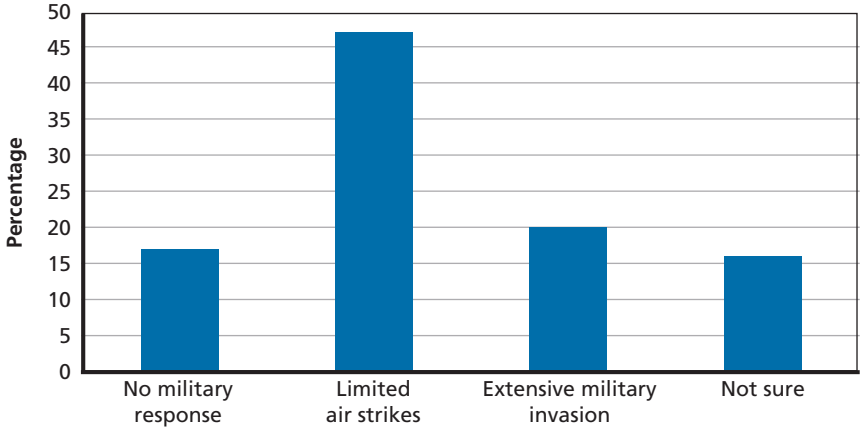
19 Lambeth, 2000, p. 100.

50 U.S. Navy and Air Force aircraft struck Libyan military targets in Benghazi and Tripoli in a raid that was over in less than 15 minutes. Navy aircraft operated from aircraft carriers in the Mediterranean; Air Force F-111s flew from Lakenheath AB in England.[20] This operation is the most short-lived of any discussed in this report.

OEC-related polling occurred immediately prior to the attack, shortly after the attack (in April and May), and finally in September 1988. Figure 4.7 displays results from a survey asking respondents their views on several military options. This poll, taken shortly before the attack, shows strong support for air strikes, more than double the support for an invasion or no response.

Figure 4.8 displays results from four polls taken over the four weeks following the air strikes and one survey taken over two years later. The four immediate polls demonstrate consistent (69 to 77 per-

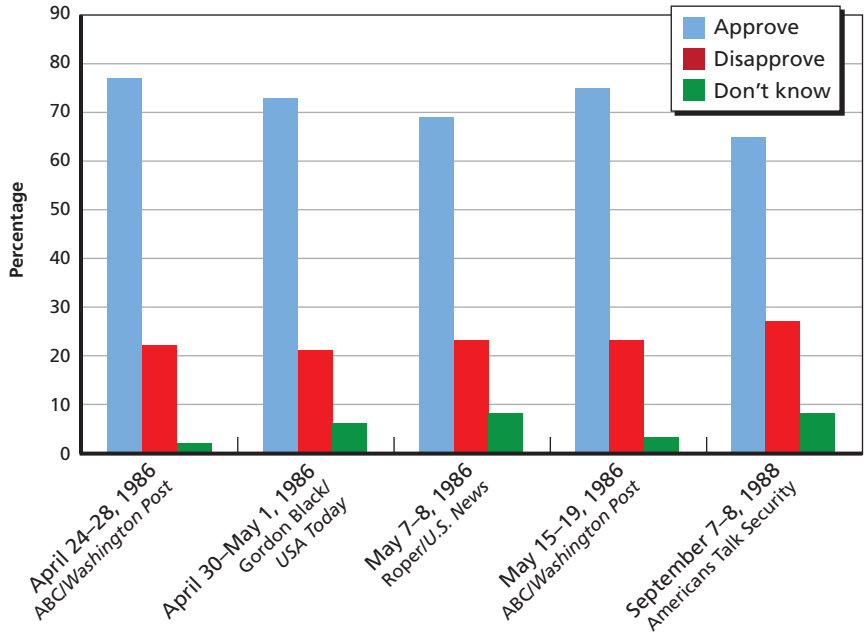
Figure 4.7
"How Do You Think the United States Should Respond to the Terrorists Acts Attributed to Libya?"



SOURCE: NBC News/*Wall Street Journal* poll, April 13, 1986. Data provided by the Roper Center for Public Opinion Research, University of Connecticut.
RAND *RR1044-4.7*

[20] Bernard C. Nalty, ed., *Winged Shield, Winged Sword: A History of the United States Air Force*, Volume II, *1950–1997*, Washington, D.C.: U.S. Air Force, 1997, pp. 417–425. See also Robert Venkus, *Raid on Qaddafi*, New York: St Martin's Press, 1992.

Figure 4.8
U.S. Public Support for the Eldorado Canyon Air Strikes



SOURCE: Data provided by the Roper Center for Public Opinion Research, University of Connecticut.

RAND *RR1044-4.8*

cent) support for the operation. Even two years later, 65 percent of respondents approved of the air strikes.

- "On another subject, do you approve or disapprove of the United States having launched the military air strike against Libya last Monday?" (ABC, April 1986)
- "Next I would like to ask you some questions about the U.S. air attack on terrorist bases in Libya. As you may know, U.S. planes bombed selected targets in Libya a few weeks ago. Based on how you feel now, do you approve of this action by the U.S.?" (Gordon Black/*USA Today*, May 1986)
- "In Mid-April, U.S. Navy planes from carriers in the Mediterranean and U.S. Air Force planes based in Britain made a bombing

strike against Libya. Do you approve or disapprove of the United States jets bombing Libya?" (Roper/*U.S. News*, May 1986)
- "Do you approve or disapprove of the United States having launched the military strike against Libya on April 14, 1986?" (ABC/*Washington Post*, May 1986)
- "I'm going to read you some cases where the United States has used its military power since World War II. For each one, please tell me if you feel we should have or should not have used our military the way we did. . . . The bombing of Libya by the U.S. Navy and Air Force in 1986?" (Americans Talk Security, 1988)

The Peace Is Our Profession narrative period ended a few years after Operation Eldorado Canyon. The next section explores public attitudes over the 12 years following the end of the Cold War.

1991–2003

This period corresponds to the Victory Through Air Power (reprise) era that was initiated in 1991 by airpower's highly visible and successful role in Operation Desert Storm. Airpower, and the Air Force specifically, gained great social currency as a result of ODS. This was the result of new military technologies and a new media business model—the 24/7 cable news network. The military technologies produced compelling targeting pod videos of precision strikes against Iraqi strategic and tactical targets. CNN made these videos available to the public day and night as part of its around-the-clock news coverage. Stealth aircraft, laser-guided bombs, tank plinking, and concepts such as air superiority became part of everyday conversations.

Between 1991 and 2003, there were three sets of surveys and three individual polls that offer some insight on public attitudes toward the services. The three sets of surveys were taken during (1) Operation Desert Storm in January/February 1991, (2) the Balkan Conflict from 1992 to 1995, and (3) Operation Allied Force in the Spring of 1999. The individual surveys were taken in 1998, 2001, and 2002. The 1998 survey asked which service branch should be "built up." The 2001 and

2002 surveys asked which military branch was "most important for national defense," an update of the "most important" service question asked between 1949 and 1960. Each of these surveys will be discussed in turn below, but first a few caveats regarding the limitations of the surveys taken during the three conflicts.

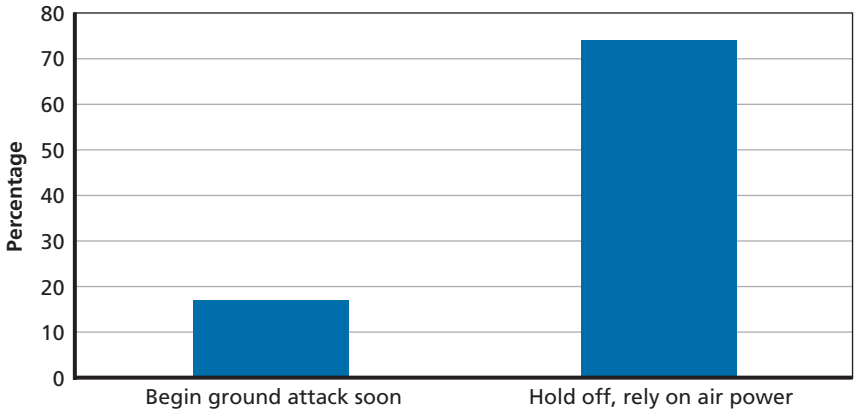
In each conflict, surveys asked whether respondents supported air strikes and, in Operations Desert Storm and Allied Force, they also were asked whether airpower alone would be sufficient or whether ground forces would be required. Respondents were not asked which military instrument (e.g., air, ground, or naval power) or combination of instruments would be most effective in a given situation. Thus, there are no head-to-head comparisons across all services in the surveys. A few surveys did offer respondents choices such as "Military air strikes will be enough" or "Will have to send in ground forces." Most surveys asked only whether the respondent favored or opposed air strikes. Support for air strikes could indicate confidence in airpower or a preference for the Air Force, but it could just as easily reflect a willingness to go along with policies already announced or support for any military action. The same can be said for any lack of support. It could reflect skepticism about airpower, a preference for other services, or more general opposition to a given administration's policies. Unfortunately, the surveys are insufficiently detailed to answer these questions.

The discussion now turns to an exploration of the various surveys, beginning with those conducted during ODS.

Operation Desert Storm

The next opportunity to explore public attitudes toward alternative military instruments was during ODS. Exactly three weeks after the start of the air campaign, Gallup asked "Do you think the United States and allies should begin a ground attack soon to drive the Iraqis out of Kuwait or should we hold off for now and continue to rely on airpower to do the job?" As can be seen in Figure 4.9, the public strongly preferred letting the air campaign continue for some unspecified period. This likely reflected three factors: (1) public support for measures that

Figure 4.9
"Should the United States and Its Allies Begin a Ground Attack Soon to Drive the Iraqis Out of Kuwait, or Should We Hold Off for Now and Continue to Rely on Airpower to Do the Job?"



SOURCE: RAND chart based on Gallup data. February 7–10, 1991, national adult survey based on 1,013 telephone interviews. Data provided by the Roper Center for Public Opinion Research, University of Connecticut.

RAND *RR1044-4.9*

could minimize casualties,[21] (2) government reports that the bombing had not yet degraded Iraqi capabilities to a level that would minimize U.S. losses if a ground war were launched,[22] and (3) the ease with which allied air forces were striking Iraqi targets with minimal losses. Although public patience might have worn thin if the air campaign had lasted months, after only three weeks the public was not yet ready to push for the ground campaign.

If this were the only poll, one might also have speculated that the public either strongly believed that airpower could coerce Saddam Hussein into withdrawing Iraqi forces from Kuwait or was at least cau-

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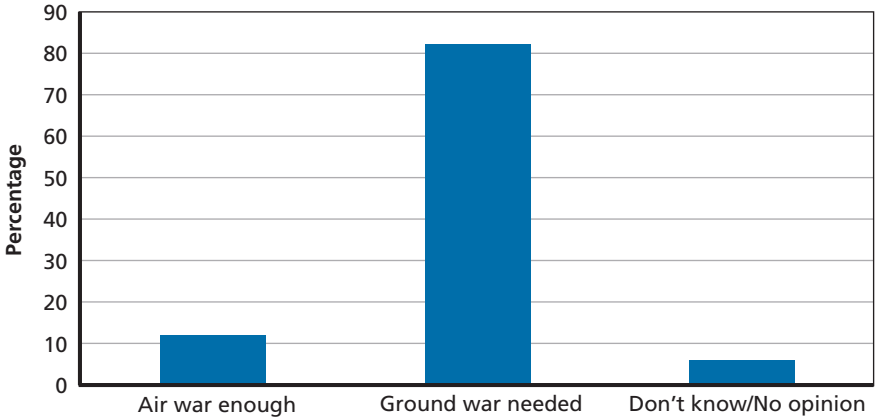
[21] See Eric V. Larson, *Casualties and Consensus: The Historical Role of Casualties in Domestic Support for U.S. Military Operations*, Santa Monica, Calif.: RAND Corporation, MR-726-RC, 1996, p. 39. See pp. 30–38 for a detailed assessment of public attitudes toward casualties during ODS.

[22] See Patrick E. Tyler, "Best Iraqi Troops Not Badly Hurt by Bombs, Pentagon Officials Say," *New York Times*, February 6, 1991, p. 1.

tiously optimistic that this might happen. An ABC/*Washington Post* poll conducted on February 8–12 (immediately after the Gallup poll) dispels that possibility. The survey asked "Just your best guess, do you think the air war will be enough to force Iraq out of Kuwait or do you think it will take a ground war?" Despite the impressive display of allied airpower and the general sense that the air war was going well, 82 percent of respondents still said that a ground war would be required (see Figure 4.10). This may have been a judgment that the public would have reached on its own or a result of elite cuing,[23] in particular President Bush's comment that he was "somewhat skeptical" that airpower by itself could achieve U.S. war goals. That statement became the *New York Times* lead story on February 6, two days before

Figure 4.10
"Just Your Best Guess, Do You Think the Air War Will Be Enough to Force Iraq Out of Kuwait, or Do You Think It Will Take a Ground War?"



SOURCE: RAND chart based on ABC/*Washington Post* data. February 8–12, 1991, national adult sample of 1,011 telephone interviews. Data provided by the Roper Center for Public Opinion Research, University of Connecticut.
RAND *RR1044-4.10*

[23] Elite cue theory argues that public opinion on policy issues is driven by cues from the most prominent partisan political actors. See Zaller, 1992, and Brody, 1992.

the ABC poll began, under a banner declaring "Bush Doubts Air War Alone Will Defeat Iraqi Military."[24]

What impact did the first Gulf War have on public attitudes toward airpower? Clearly, allied air forces displayed great competence in orchestrating and executing the world's first multinational air and missile campaign. Conducting parallel attacks against both tactical and strategic targets, allied air planners integrated joint assets (including missiles) in a manner that, if not seamless, was nevertheless well beyond anything the United States or any other combatant had achieved in prior conflicts. The ubiquity of coalition ISR platforms and ability to generate strike missions with that information made it largely impossible for Iraq to conduct offensive ground operations. Whatever hopes the Iraqis might have entertained about reclaiming the initiative were crushed by the airpower rout of Iraqi armored units in the Battle of Al Khafji on January 29.[25]

Most military professionals, defense specialists, and senior government officials in the United States (as well as many other countries) saw airpower in a new light following ODS. Some observers saw in ODS a revolution in military affairs in which the roles of ground and air forces were largely switched.[26] A vast post-ODS professional literature sought to understand the meaning of American air dominance for future conflict. This broad professional and public conversation gave airpower a prominence and prestige that it had not enjoyed since the height of the Cold War. One measure of the social currency that airpower enjoyed was its appearance in Jeff MacNelly's popular comic strip *Shoe* sometime in 1991. A teenage character named Skylar is asked in history class why the South lost the American Civil War. Skylar responds that although there were multiple causes, the primary

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[24] Andrew Rosenthal, "Bush Doubts Air War Alone Will Defeat Iraqi Military: Bombings Continue: Powell and Cheney Sent to Gulf to Assess Need for a Ground War," *New York Times*, February 6, 1991, p. 1.

[25] Richard P. Hallion, *Storm over Iraq: Air Power and the Gulf War*, Washington, D.C.: Smithsonian Institution Press, 1992, pp. 219–223.

[26] See, for example, Lambeth, 2000.

reason was that the South failed to achieve air superiority.[27] As Hallion notes, this cartoon would have gotten few laughs outside of airpower circles in 1990, but a few months after ODS, esoteric concepts such as air superiority were now part of everyday conversations. That said, high social currency should not be confused with consensus regarding the role of airpower in the defeat of the Iraqi army. The debate over the causes of the Iraqi army collapse continues to this day.[28]

The Balkan Conflict: 1992–1995

There is limited information on public attitudes toward the USAF between 1991 and 1999. The available survey data are focused on the use of coercive airpower in the Balkans from spring 1992 to late 1995. In 1992, Gallup began a series of surveys related to the Serbian siege of the Bosnian capitol of Sarajevo (which lasted from April 1992 to February 1996), seeking to understand whether the public supported air strikes to force a Serb withdrawal. Figure 4.11 displays the results of six polls by Gallup and other major polling organizations.

- "If Serbian forces continue to block relief efforts to Sarajevo, do you think the U.S. should take the lead in seeking United Nations–backed air strikes against the Serbians or not?" (Gallup, July 1992)
- "If Serbian forces continue to block relief efforts to Sarajevo, do you think the U.S. air units should participate in air strikes against Serbian forces in Bosnia (former Yugloslav Republic) or not?" (Gallup, August 1992)

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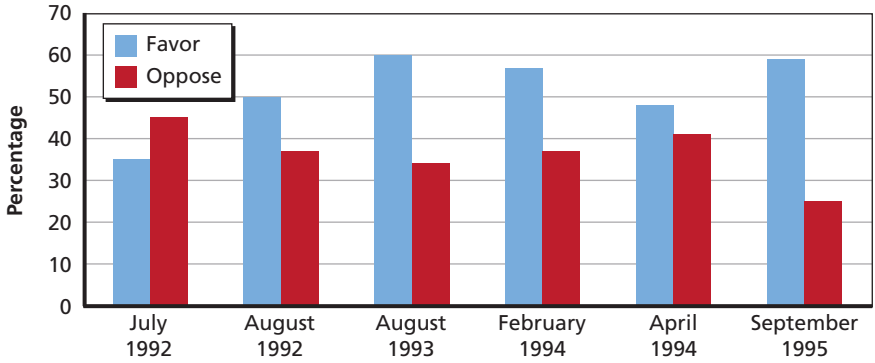
[27] Richard Hallion, *Control of the Air: The Enduring Requirement*, Bolling AFB, D.C.: Air Force History and Museums Program, September 8, 1999, p. 40.

[28] Among the more prominent authors arguing that airpower largely crippled Iraqi ground forces prior to the allied ground campaign are Lambeth, 2000; Hallion, 1997; and Deptula, 2001. This also was the judgment of the Gulf War Air Power Study. For an alternative view arguing that the low quality of Iraqi ground forces was the decisive factor, see Press, 2001, pp. 5–44. A related view offered by Stephen Biddle argues that the interaction between Iraqi ineptitude and new U.S. technologies best explains the one-sided outcome. See Stephen Biddle, "Victory Misunderstood: What the Gulf War Tells Us About the Future of Conflict," *International Security*, Vol. 21, No. 2, Fall 1996, pp. 139–179.

Figure 4.11
Public Support for Air Strikes Against Serbian Forces, Balkans Conflict, 1992–1995



SOURCE: RAND chart based on the following surveys: Gallup July 31–August 2, 1992; Gallup August 6–7, 1992; ABC News/*Washington Post* August 6–8, 1993; ABC News February 7, 1994; *Time*/CNN/Yankelovich Partners April 21, 1994; CBS News September 5–6, 1995. Data provided by the Roper Center for Public Opinion Research, University of Connecticut.

RAND *RR1044-4.11*

- "Would you support or oppose the United States, along with its allies in Europe, carrying out air strikes against Bosnian Serb forces who are attacking the Bosnian capital of Sarajevo?" (ABC News/*Washington Post*, August 1993)
- "Would you support or oppose the United States, along with its allies in Europe, carrying out air strikes against Bosnian Serb forces who are attacking the Bosnian capital of Sarajevo?" (ABC News, February 1994)
- "As you may know, the U.S. and its Western European allies are using military planes to protect Sarajevo from Serbian military forces. Do you favor or oppose using military planes to give the same protection to Gorazde, the city currently under siege, and other Muslim towns?" (*Time*/CNN/Yankelovich, April 1994)
- "Do you approve or disapprove of the United States and NATO conducting air strikes on Bosnian Serb positions in response to Serb shelling of the market place in Sarajevo last week?" (CBS News, September 1995)

The first two Gallup polls (taken within a ten-day period) contradicted one another, perhaps reflecting limited American interest in or knowledge of Balkan affairs. Sobel reports that "interest in the Bosnia issue was initially low, with only a third to a half of Americans following the situation closely, but it grew to a substantial majority following the crises in the summer of 1995."[29] Although it never quite lost its exotic status, the conflict in Bosnia became sufficiently familiar to the American public through daily news reports that consonant-heavy Bosnian city names became fodder for pop culture humor, such as found in *The Onion's* comedy news report "Clinton Deploys Vowels to Bosnia: Cities of Sjlbvdnzv, Grzny to Be First Recipients." The vowels were reportedly dropped by parachute from C-130s.[30]

Support for air strikes increased substantially once the United States and NATO began Operation Deny Flight in April 1993, rising to 60 percent by that summer.[31] It dropped a bit below 50 percent in 1994 but rose again to near 60 percent during Operation Deliberate Force in August/September 1995. The increase in support may reflect a sense that the operation was nearing a successful end. Support was weaker for ground force intervention, with 40 percent supporting sending troops to protect civilians in Sarajevo and 50 percent opposing in one February 1994 poll.[32] Although a majority did support air strikes in four of these six polls, it wasn't overwhelming, not surprisingly, given the relatively low salience of the Balkans conflict

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[29] Richard Sobel, "Portraying American Public Opinion Toward the Bosnia Crisis," *Harvard International Journal of Press/Politics*, 1998, 3:16, p. 17.

[30] See "Clinton Deploys Vowels to Bosnia; Cities of Sjlbvdnzv, Grzny to Be First Recipients," *The Onion*, December 1995.

[31] In contrast, an August 13–18, 1993, Harris poll found only 38 percent favoring air strikes with 50 percent opposing. The Harris poll is, however, an outlier; most of the other polls conducted between 1992 and 1995 found higher support for air strikes. For example, Sobel found that 58 percent of polls he analyzed showed "majority or plurality support for U.S. air strikes." See Sobel, 1998, p. 21.

[32] This was the only poll we found comparable to those regarding air strikes. This February 10, 1994, *Time*/CNN/Yankelovich Partners poll (national sample of 500) asked, "If air strikes don't make the Serbs withdraw their forces from around Sarajevo, do you favor or oppose sending U.S. and NATO ground troops into Sarajevo to protect the civilians there?" Data from the Roper Center for Public Opinion Research, University of Connecticut.

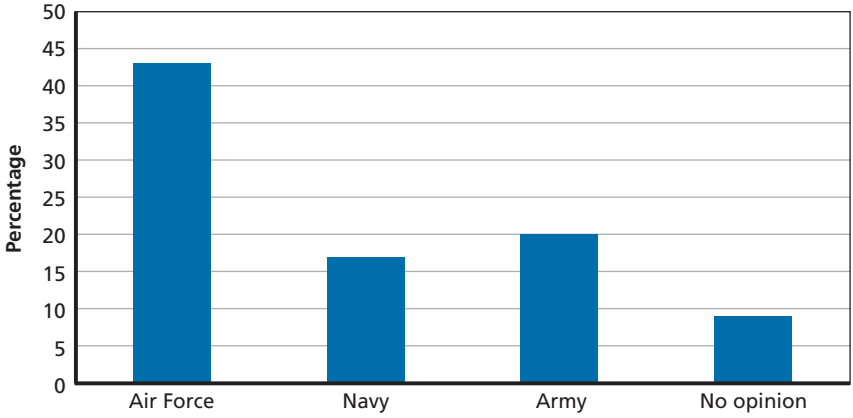
for most Americans. It appears that given the determination of U.S. and NATO leaders to act on behalf of besieged civilians in Bosnia and the widespread reluctance to introduce ground forces, Americans saw airpower as a relatively low-risk option with reasonable prospects for at least limited success. The modest majority supporting the air strikes suggests, however, that on average 30 to 40 percent of the public had doubts about the effectiveness or costs of air operations, feared mission creep, or did not see sufficient U.S. interest to justify the intervention. About 10 percent of respondents were not sufficiently engaged to have an opinion. Regarding American attitudes more generally toward the USAF, the polls imply a belief that airpower can be employed without great risk or cost and the single head to head comparison with ground forces showed a strong preference (17 percentage points) for air rather than ground forces in that situation.

1998 Survey: Which Service Should Be Built Up?

We found no service preference polling for 1996 or 1997. The next poll was taken in 1998; Gallup asked which service branch should be "built up" along the lines of earlier questions asked in the 1930s and 40s (see Figures 4.1 and 4.2). Figure 4.12 displays the results of the 1998 survey. It is not clear how respondents understood that question or what exactly drove their answers in either this or earlier polls. Do their answers reflect a fondness for one service over the others, a belief that one service is more important than the others or a view that one service has problems or shortfalls that inhibit its performance? Regarding the latter possibility, the Air Force in 1997 received 29.9 percent of the DoD budget compared with 30.8 percent for the Navy and 25.3 percent for the Army, so it is hard to make the case that it was underfunded relative to the other services.[33] The high Air Force score may reflect public appreciation for the prominent role that airpower played in the Balkans between 1993 and 1995 or perhaps a sense that

[33] Service budget shares were calculated by RAND colleague Stephen Seabrook using OSD Comptroller FY 14 budget materials (Office of the Under Secretary of Defense [Comptroller], *National Defense Budget Estimates for FY 2014*, Washington, D.C., 2013, Table 6-13).

Figure 4.12
"Which Branch of the Armed Services Do You Think Should Be Built Up to Greater Extent—the Army, Air Force, or Navy?"



SOURCE: RAND chart based on Gallup November 20–22, 1998 survey. Data provided by the Roper Center for Public Opinion Research, University of Connecticut.
RAND *RR1044-4.12*

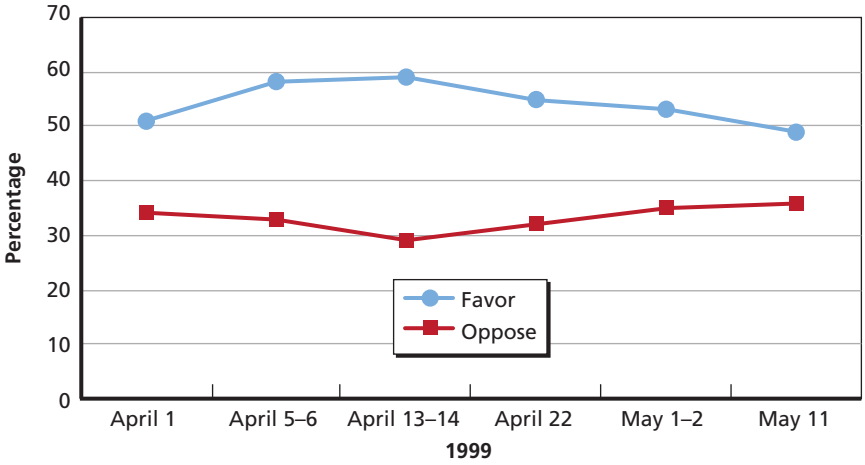
demands on the USAF that decade were heavy, requiring some shifting of resources to sustain capabilities.

Operation Allied Force

The next opportunity to explore public opinion toward the USAF and airpower was during Operation Allied Force in 1999. Several polling and news organizations (including Gallup, Pew, PSRA/*Newsweek*, and CBS) conducted frequent polling during the conflict. The CBS News polls shown in Figure 4.13 are representative of the surveys.

Support for the air strikes remained relatively high throughout this period, varying between 49 percent and 59 percent. On the other hand, support declined consistently between April 13–14 and the May 11 survey, ending 10 percent below the peak. Also, on the three occasions when surveys asked whether air strikes would be enough to achieve U.S. and NATO objectives, few respondents expressed that view. Roughly 70 percent of respondents in all three polls said that

Figure 4.13
"Do You Favor or Oppose the United States and NATO Conducting Air Strikes Against Yugoslavia?"



SOURCE: RAND chart based on CBS News surveys from April 1, April 5–6, April 13–14, April 22, May 1–2, May 11, 1999. Data provided by the Roper Center for Public Opinion Research, University of Connecticut.

RAND *RR1044-4.13*

ground forces would be required. This result largely mirrors similar polls taken during ODS in 1991.[34]

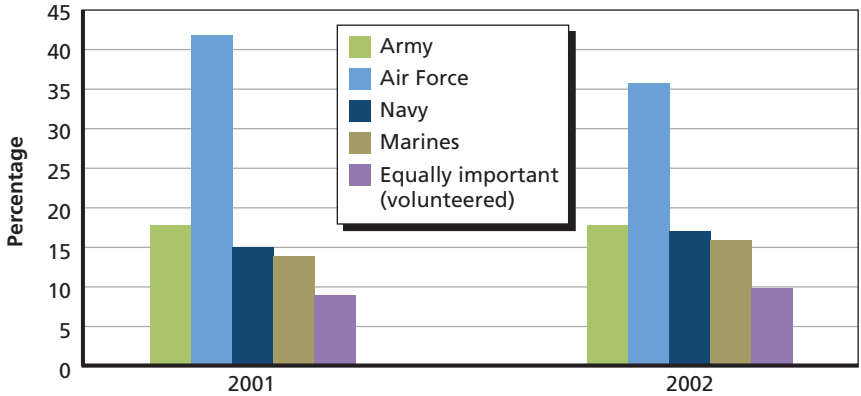
"Most Important Branch for National Defense" Surveys, 2001–2002

The final data for the period 1991–2003 are two Gallup surveys from 2001 and 2002 that ask an updated version of the 1949–1960 "most important military branch" question, specifically: "Which of the five branches of the armed forces in this country would you say is the most important to our national defense today?" Note that the Marine Corps and Coast Guard are now included explicitly as choices, not just the Army, Air Force, and Navy, as was done in the polls between 1935 and

[34] The following polls asked "Will air strikes be enough or will ground forces be required?" PSRA/*Newsweek* April 1–2, 1999; ABC April 5, 1999; and NBC April 17–19,1999. As it turned out, the public was wrong; Milosevic surrendered prior to any offensive use of NATO ground forces. See Stephen T. Hosmer, *The Conflict over Kosovo: Why Milosevic Decided to Settle When He Did*, Santa Monica, Calif.: RAND Corporation, MR-1351-AF, 2001.

2000. It is also worth highlighting that the earlier polls asked variations of the question focused on which service would be most important in winning a world war—an important distinction that may have skewed earlier polls somewhat toward the Air Force and more recent polls somewhat toward ground forces. Recall that when the last set of similar polls was asked in 1960 (see Figure 4.5) that the Air Force polled at 62 percent and other services in the single digits. Although the Air Force by May 2001 had dropped 20 percentage points to 42 percent, it was still the top choice, as shown in Figure 4.14. Gallup asked this question again seven months after 9/11 (in April 2002) and although the Air Force experienced a modest (6 percentage points) drop, it still remained over 15 percentage points above the other services. At this point, military operations in Afghanistan do not appear to have significantly impacted public attitudes. For example, the Army polled identically at 18 percent in both of these polls while the Marine Corps and Navy gained modestly. Thus, the Air Force ends the second "Victory Through Air Power" narrative era strongly favored by the public. Less

Figure 4.14
Most Important Branch for National Defense, 2001–2002



SOURCE: RAND chart based on Gallup polls, May 18–20, 2001, and April 22–24, 2002. Data provided by the Roper Center for Public Opinion Research, University of Connecticut.

RAND *RR1044-4.14*

happily for the Air Force, and as we will discuss in the next section, 2002 also marked the end of Air Force dominance in the "most important branch" polls.

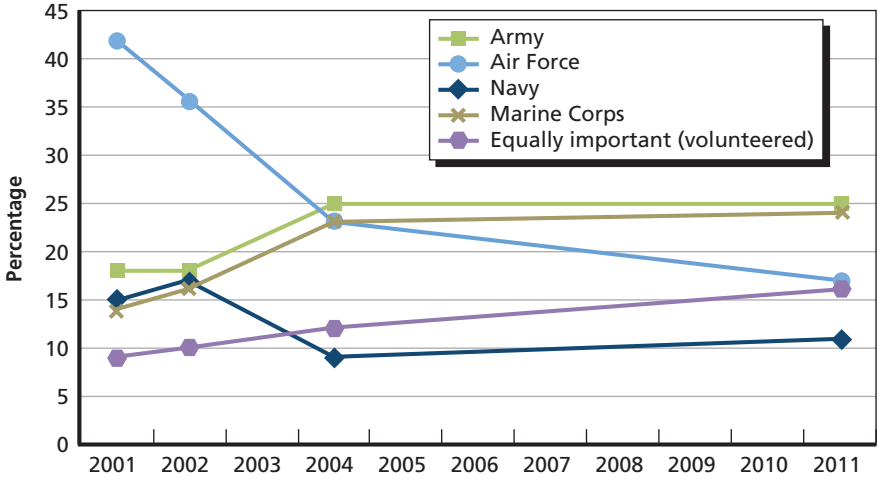
2003 was selected as the end of this second "Victory Through Air Power" period because Operation Iraqi Freedom began in March 2003 with a major air campaign, and airpower played a large role in enabling a short and successful ground offensive characterized by relatively small (and often light) ground forces moving rapidly and, in the process, often outranging ground fire support. Unfortunately, there do not appear to be any surveys capturing public attitudes toward airpower in 2003, so it is not known whether the public shared this view or was more appreciative of the central and more visible role of ground forces in the invasion and ultimate capture of Baghdad. As will be discussed below, one thing is known: By the spring of 2004, American attitudes toward the services had changed markedly.

2004–2014

This section considers changes in public attitudes toward the services during Operations Enduring and Iraqi Freedom. Although the focus is the period associated with the "We Are Critical Enablers" narrative (mainly 2004 to 2011), changes in attitudes regarding the "most important branch" from 2001 to 2014 are plotted to provide a broader context.

As can be seen in Figure 4.15, the Air Force dropped 13 percentage points between the April 2002 and May 2004 polls, while the Army and Marine Corps both gained 7 percentage points. The three services were essentially tied at that point. This poll result likely reflects the broader events of 2003 and 2004, in which the successful overthrow of the Saddam Hussein regime was quickly followed by a Sunni insurgency of increasing intensity. U.S. Army and Marine Corps forces bore the brunt of the fighting and were most visible in news reports, particularly because of their growing casualties (U.S. fatalities reached

Figure 4.15
"Which of the Five Branches of the Armed Forces in This Country Would You Say Is the Most Important to Our National Defense Today?" 2001–2011



SOURCE: RAND chart based on Gallup polls, May 18–20, 2001; April 22–24, 2002; May 21–23, 2004; June 9–12, 2011. Data provided by the Roper Center for Public Opinion Research, University of Connecticut and Gallup.
NOTE: Gallup polls 2001–2011 did not offer "equally important" as choice; recorded "same" response when volunteered.
RAND *RR1044-4.15*

a new high in April 2004).[35] Also, the first Battle of Fallujah, a fierce urban fight, ended just a few weeks prior to the May 2004 poll.

Gallup did not ask this question for another seven years. By 2011, almost a year after the end of U.S. combat operations in Iraq, the public view that ground forces were most important had not softened, perhaps because of ongoing combat operations in Afghanistan. In this 2011 poll, the Army remained at 25 percent and the Marine Corps went up 1 percent point to 24 percent. The Navy also went up slightly. The Air Force dropped another 6 percent to a historic low. Finally, "equally important" went up from 12 to 16 percent.

[35] 135 Americans died in Iraq in April 2004. See National Public Radio, "The Toll of War in Iraq: U.S. Casualties and Civilian Deaths," accessed September 12, 2014.

Public Support for Airstrikes in Libya, March 2011

Although the USAF public narrative in 2011 still centered on the "We Are Critical Enablers" theme, events in Libya that year offered an opportunity to showcase other strengths of airpower, strengths more in keeping with traditional USAF narratives. Indeed, a December 2011 *Air Force Magazine* editorial assessing the operation was titled (not surprisingly) "Libya: Victory Through Airpower," evoking the most ambitious and inspirational USAF narrative to date.[36] Thus, it is worth taking a moment to consider the impact (if any) of the Libyan intervention on public attitudes toward the USAF and airpower.

On March 19, 2011, U.S. and NATO air forces began air strikes against Libya, initially to protect civilians from attack by government forces and ultimately to help rebel forces overthrow Colonel Muammar Qaddafi's regime. The U.S.-led Operation Odyssey Dawn (OOD) ran from March 19 to March 31, at which point NATO took command under Operation Unified Protector (OUP). OUP ran until the end of September, when the last loyalist cities fell to the rebels.[37] Both operations used U.S. and NATO airpower (both land- and sea-based) to support Libyan rebel ground forces. Although not without controversy, the operation enjoyed support from influential publications such as the *New York Times*, which described the operation as "an expansive and increasingly potent air campaign to compel the Libyan Army to turn against Col. Muammar el-Qaddafi."[38] One prominent airpower analyst (writing in 2013) saw OOD/OUP as "decisive in actually toppling the regime and facilitating Gaddafi's death without any allied ground combat involvement" and reflective of a new model of warfare (includ-

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[36] Adam J. Hebert, "Libya: Victory Through Airpower," *Air Force Magazine*, December 2011, AFA online. *Air Force Magazine* published two articles in the midst of Operation Odyssey Dawn/Operation Unified Protector, but both focused on operational details rather than a higher-level narrative about airpower. See John A. Tirpak, "Bombers over Libya," *Air Force Magazine*, July 2011, pp. 36–39; and Amy McCullough, "The Libya Mission," *Air Force Magazine*, August 2011, pp. 28–32.

[37] For more on the Libyan intervention, see Christopher S. Chivvis, *Toppling Qaddafi: Libya and the Limits of Liberal Intervention*, Cambridge, UK: Cambridge University Press, 2013.

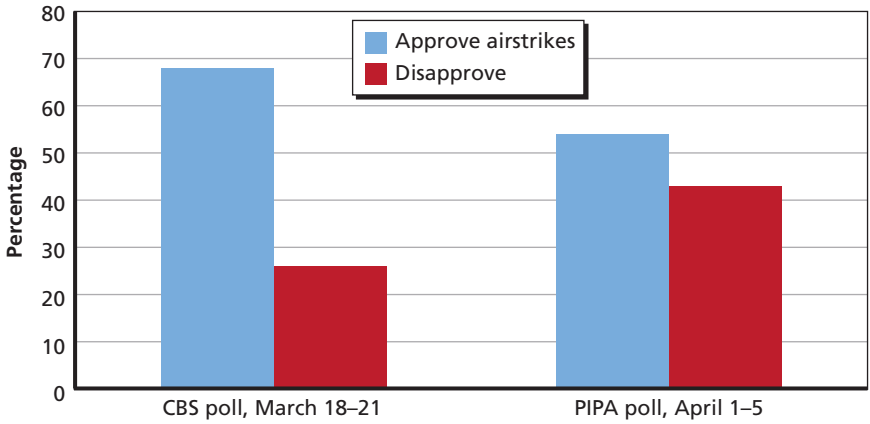
[38] Eric Schmitt, "U.S. Gives Its Air Power Expansive Role in Libya," *New York Times*, March 28, 2011.

ing the opening phases of OEF and OIF) in which "*ground forces* have now come to do most of the shaping and fixing of enemy forces, with *airpower* now doing most of the actual killing of those forces."[39]

Given the air-centric U.S. role, one might have expected the USAF to get a bounce in the June 2011 Gallup "most important branch" poll but, as discussed above, that was not the case. The operation may have been too short to overcome almost a decade of focus on ground operations in Iraq and Afghanistan, or perhaps by the date of the June survey the operation was beginning to look less than decisive. CBS and PIPA polls displayed in Figure 4.16 illustrate a decline in public enthusiasm for the air strikes from 68 percent support in the March poll to 54 percent in the April poll.

- "As you may know, the US (United States) military and other countries have begun cruise missile and air strikes in Libya in

Figure 4.16
Public Support for Air Strikes Against Libya, March–April 2011



SOURCE: RAND chart based on CBS and PIPA data. Data provided by the Roper Center for Public Opinion Research, University of Connecticut.
RAND *RR1044-4.16*

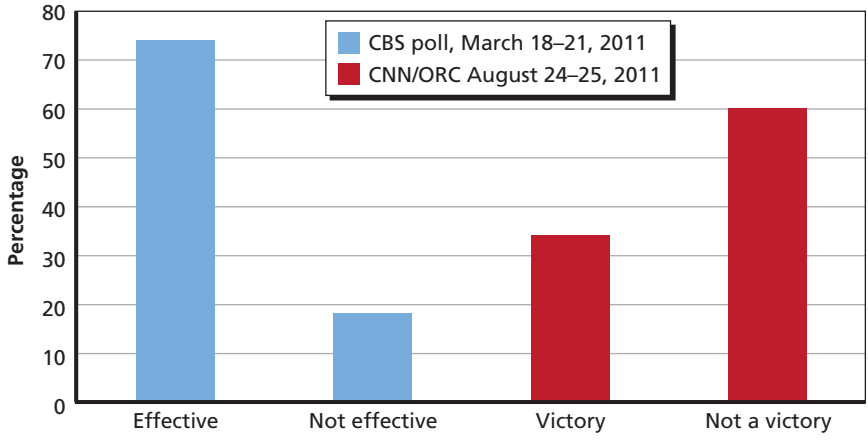
[39] Lambeth, 2013, pp. 36 and 42 (italics in original).

order to protect civilians from attacks by (Colonel Muammar el) Qaddafi's forces. Do you approve or disapprove of the US and other countries taking this military action in Libya?" (CBS, March 2011)

- "As you may know, the US (United States) military and other countries have begun cruise missile and air strikes in Libya in order to protect civilians from attacks by (Moammar) Qaddafi's forces. Do you approve or disapprove of the US and other countries taking this military action in Libya?" (PIPA, April 2011)

This change is also reflected in other poll questions shown in Figure 4.17. Unlike earlier operations, for which a majority of the public believed that air strikes would not be effective on their own, in March over 70 percent of respondents said that airpower would be effective in the limited goal of protecting Libyan civilians. By August, however, just over 30 percent of respondents believed that the outcome of the air strikes represented a victory for the United States.

Figure 4.17
"How Effective Will Air Strikes Be in Protecting Civilians? Was the Outcome of Air Strikes in Libya a Victory for the United States?"



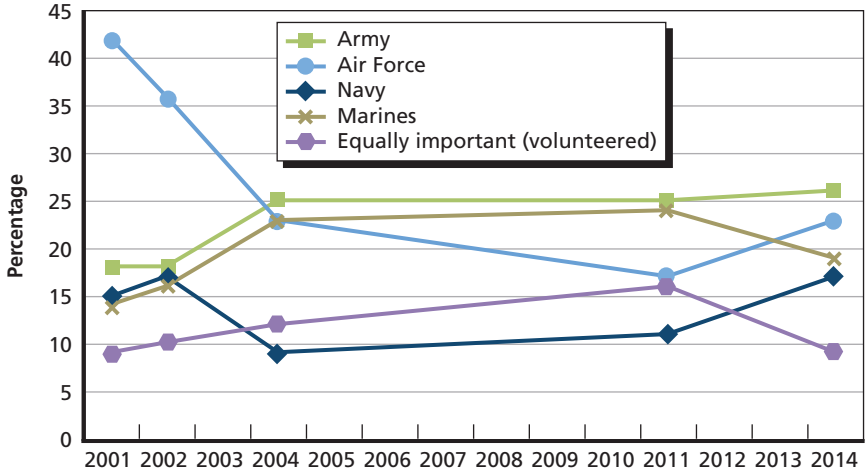
SOURCE: RAND chart based on CBS and CNN data. Data provided by the Roper Center for Public Opinion Research, University of Connecticut.

RAND *RR1044-4.17*

In sum, although air strikes in Libya were supported by a majority of survey respondents, the operation does not appear to have increased the number of survey respondents who chose the USAF as the most important branch.

Returning to the series of Gallup polls on the "most important" service branch, consider the May 2014 survey, displayed in Figure 4.18. This survey shows small but intriguing changes in public attitudes. With combat operations in Iraq over and drawing to a close in Afghanistan, one might expect a "postwar effect" in which the public—weary after a dozen years of ground combat and increasingly exposed to news reporting about the Chinese military challenge, the "Asia pivot," and the new AirSea Battle concept—would shift its focus from ground-centric operations in the Greater Middle East to air/naval-centric challenges in East Asia. That happened in part with both the Navy and Air Force improving but the intriguing change in the 2014 poll is that all the services have

Figure 4.18
"Most Important Service for National Defense," 2001–2014



SOURCE: RAND chart based on Gallup polls, May 18–20, 2001; April 22–24, 2002; May 21–23, 2004; June 9–12, 2011; May 8–11, 2014. Data provided by the Roper Center for Public Opinion Research, University of Connecticut and Gallup. Note: Gallup polls 2001–2014 did not offer "equally important" as choice; recorded "same" response when volunteered.

RAND *RR1044-4.18*

moved closer to one other, reflecting the most important trend in the history of this survey question. Indeed, with a sampling error of +/– 4 percent, each of the services is statistically tied with at least one other branch: The Army/Air Force, the Air Force/Marine Corps, and Marine Corps/Navy are all within sampling error of one another.[40] These statistically similar results suggest a public that is almost evenly divided in attitudes toward the services. This represents a profound change in attitudes since Gallup first asked this question 65 years ago.

Figure 4.19 brings together the Gallup polling from 1949 to 1960 with the more recent surveys. We don't know how the public would have answered this question in the missing years between 1961 and 2000. All we can say is that the first of the modern surveys began with the Air Force 20 percentage points below its 1960 result and the other services up from below 10 percent to between 10 and 20 percent. What is most interesting about this comparison of all the data is how far apart the top and bottom services were in the first period and how much they have converged.

As Figure 4.20 shows, the difference between the highest and lowest service poll results among the Air Force, Navy, Army, and Marine Corps has declined greatly over the history of this poll, with the 2014 data representing the smallest to date. For example, in 1949, 84 percent of respondents chose the Air Force as the most important service, with only 4 percent choosing the Army. Thus, the difference was 80 percentage points. In contrast, in 2014, 26 percent chose the Army and 17 percent the Navy, a separation of 9 percentage points.[41]

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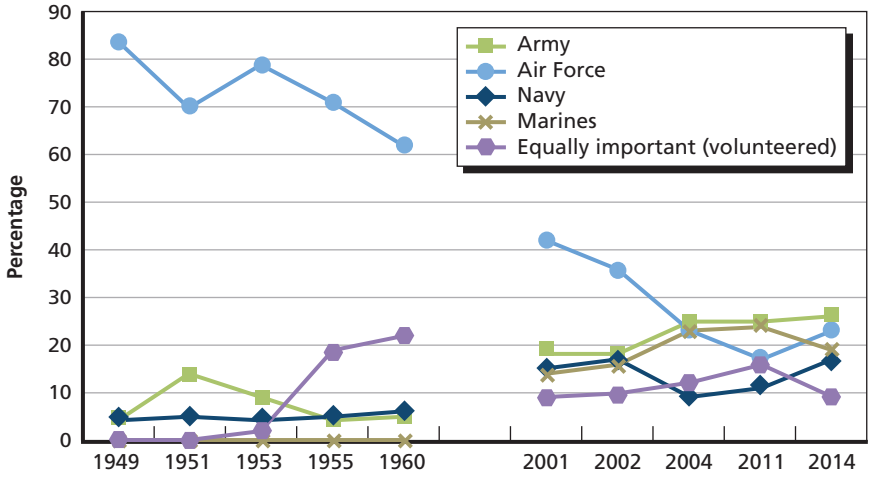
[40] All surveys have a sampling error and confidence level (in this case +/– 4 percent, 95 percent confidence) that reflect the possible difference between the opinions expressed by the survey sample members and opinions held by the total population. As noted above, results within 4 percent of one another are less likely to represent real differences of opinion. One can also compare the error ranges for each response, but this may overstate similarities. In this survey, the error bars for the Army, Air Force, and Marine Corps overlap, as do the bars for the Air Force, Marine Corps, and Navy.

[41] The shift from asking respondents about three services (between 1949 and 1960) to surveys asking about five services (between 2001 and 2014) would be expected to shrink the gap some, but as can be seen in Figure 4.19, the gap shrunk consistently within each of the periods, so it is clearly not a survey artifact (from the addition of the Marine Corps and Coast Guard to survey choices).

Figure 4.19
"Most Important Branch" Results, 1949–1960, 2001–2014



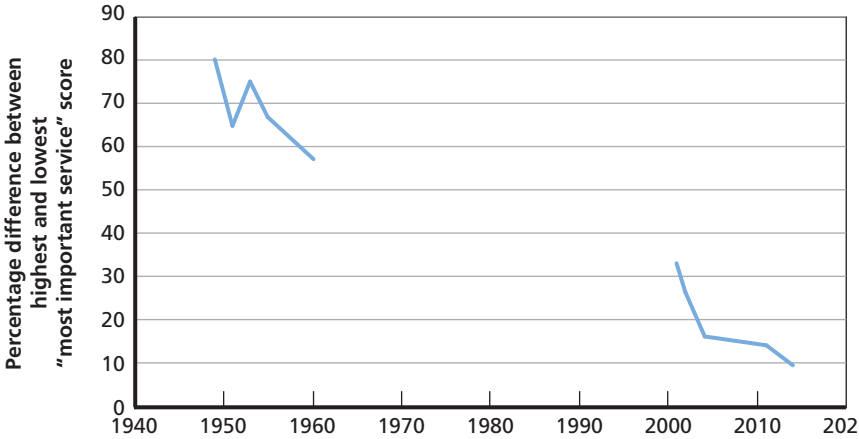
SOURCE: RAND chart based on Gallup polls, July 2–7, 1949; August 3–8, 1951; October 9–14, 1953; March 3–8, 1955; October 18–23, 1960; May 18–20, 2001; April 22–24, 2002; May 21–23, 2004; June 9–12, 2011; May 8–11, 2014. Data provided by the Roper Center for Public Opinion Research, University of Connecticut, and Gallup.
NOTES: Gallup polls did not offer "equally important" as choice; recorded "same" response when volunteered. Gallup polls between 1949 and 1960 did not include the U.S. Marine Corps or Coast Guard as answers. Not shown: "No opinion" for 1949–1960; "No opinion" or "U.S. Coast Guard" for 2001–2014.
RAND *RR1044-4.19*

This trend began during the air-centric 1950s but continued just as strongly during the ground-centric post-9/11 period. The public at large appears to be less and less inclined to identify one military service as dominant over the others.

RAND American Life Panel Survey Results

When this research began in 2013, it was unclear whether or when Gallup would ask the "most important branch" question again. To supplement the 2011 and earlier Gallup data, a RAND American Life

Figure 4.20
Converging Public Attitudes Toward the Military Services, 1949–2014



SOURCE: RAND chart based on Gallup data. Note that surveys conducted between 1949 and 1960 did not include the Marine Corps. See Figures 4.5 and 4.18 for specifics.
RAND *RR1044-4.20*

Panel (ALP) survey was conducted.[42] The ALP survey ran from April to May 2014 and asked four questions:

- "From what you have read, which of our armed services needs strengthening most at the present time—the Air Force, Army, Marines or Navy?"
- "If the United States went to war with China or Russia, which branch of the Armed Forces do you think would play the most important part in winning the war—the Army, the Navy, the Marines or the Air Force?"

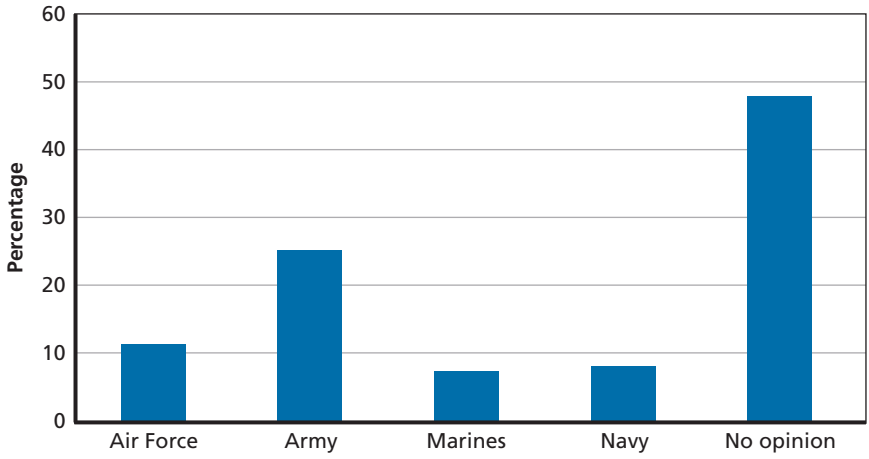
[42] The ALP is maintained by the RAND Corporation and consists of approximately 5,000 respondents ages 18 and older who are regularly interviewed over the Internet. RAND provides Internet access to panel members who do not have their own access. This poll was conducted between April 7 and May 9, 2014. 3,000 panel members were contacted. The number of responses varied slightly from 1931 responses for question one, 1,930 responses for question two, 1,929 responses for question three, and 1,928 responses for question four. The margin of error for this survey was +/– 2.2 percent at 95 percent confidence level.

- "Which of the five branches of the Armed Forces in this country would you say is most important to our National Defense today—the Air Force, the Army, the Navy, the Marines, or the Coast Guard?"
- "Which of our armed services do you most associate with advanced technologies—the Army, the Navy, the Marines or the Air Force?"

Which Service Needs Strengthening Most?

As illustrated in Figure 4.21, most respondents did not have an opinion on this topic. Those who expressed an opinion strongly preferred the Army. That might reflect a sense that the Army is worn out after a decade of combat operations in Iraq and Afghanistan, but if that was the reasoning, the Marine Corps should have polled higher as well. If the Army had polled uniformly high across the ALP questions, one might conclude that panel participants had a strong generalized preference for the Army, but, as will be seen below, that was not the case.

Figure 4.21
". . . Which of Our Armed Services Needs Strengthening Most?"

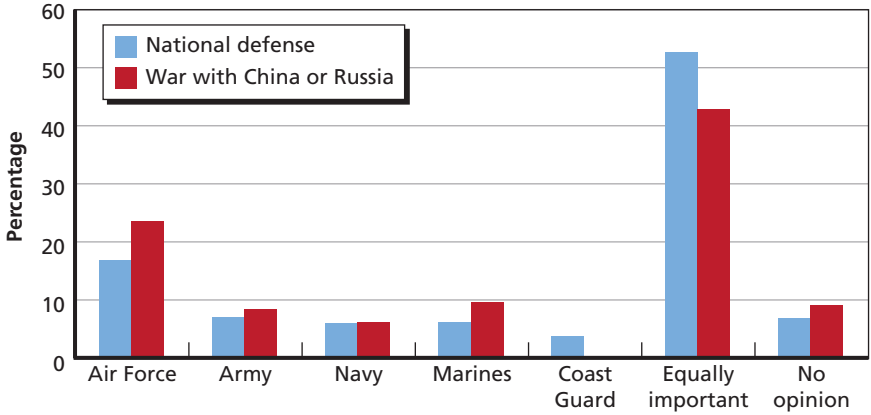


SOURCE: RAND American Life Panel survey, April 7–May 9, 2014.
RAND *RR1044-4.21*

Which Service Would Be Most Important for National Defense or in a Conflict with Russia or China?

Figure 4.22 displays responses to the two questions regarding the "most important service." The blue columns show responses for the national defense question. The red columns are responses for a new question regarding a major war with Russia or China.[43] In contrast to the Gallup poll, "equally important" was the dominant answer for both questions. It is interesting, however, that when asked the more focused "war with China or Russia" question, the number of "equally important" responses dropped almost 10 percentage points. Also in contrast to the previous RAND ALP question where respondents chose the Army as most needing strengthening, in this question the

Figure 4.22
Which Service Branch Would Be Most Important "for National Defense" or "in Winning a War with China or Russia"?



SOURCE: RAND American Life Panel survey, April 7–May 9, 2014.
NOTE: The U.S. Coast Guard was not offered as a choice for the "war with China or Russia" question.
RAND *RR1044-4.22*

[43] The "war with China or Russia" question was intended to capture the demands of conflict with a major power. One reader of an earlier draft noted, however, that respondents who have more knowledge of military affairs might have found the question problematic, since the relative importance of the services would arguably vary in a more ground-centric conflict with Russia as opposed to a more air-naval-centric conflict with China.

Air Force polled significantly higher than the other services, although well below "equally important."

The ALP result should, however, be treated with caution. In Gallup polls over the past decade, only 9 percent to 16 percent of respondents chose "equally important." Why such a difference with Gallup's results? Most likely this is the result of survey design: Gallup required respondents to volunteer "equally important" for it to be recorded, while ALP offered it as a choice.

Although Gallup's approach may have led to slight undercounting of the "equally important" view, limiting "neutral response" options is generally the preferred approach in public opinion surveys. Previous public opinion research has demonstrated "that people are much more likely to select a middle response alternative on an issue when it is explicitly offered to them as part of the question than when it must be spontaneously volunteered."[44] In this case, "equally important" in the RAND survey would be a middle response alternative. Why is the middle response attractive when offered this way? One body of research argues that

> when optimally answering a survey question would require substantial cognitive effort, some respondents simply provide a satisfactory answer instead. This behavior, called satisficing . . . may lead respondents to employ a variety of response strategies, including choosing the first response alternative that seems to constitute a reasonable answer, agreeing with an assertion made by a question, endorsing the status quo instead of endorsing social change, failing to differentiate among a set of diverse objects in ratings, saying "don't know" instead of reporting an opinion, and randomly choosing among the response alternatives offered.[45]

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[44] George F. Bishop, "Experiments with the Middle Response Alternative in Survey Questions," *Public Opinion Quarterly*, Vol. 51, 1987, pp. 220–232.

[45] Jon A. Krosnick, "Response Strategies for Coping with the Cognitive Demands of Attitude Measures in Surveys," *Applied Cognitive Psychology*, Vol. 5, 1991, pp. 213–236. See also Jon A. Krosnick et al., "The Impact of 'No Opinion' Response Options on Data Quality: Non-Attitude Reduction or An Invitation to Satisfice?" *Public Opinion Quarterly*, Vol. 66, 2002, pp. 371–403.

Unless one service has exceptionally high social currency or is particularly visible in current operations, it seems reasonable that many survey respondents would seek a neutral response if offered (as in the ALP 2014 survey) or their preferences would be more equally distributed across the four major branches (as appears to have happened in the Gallup May 2014 survey).

What about Americans with strong personal ties to specific branches? Is it possible that partisan supporters of individual services are driving the Gallup 2014 results? Roughly 7 percent of Americans are veterans, and another 1 percent currently serve in active duty, reserve, or civilian DoD positions.[46] Presumably veterans, current uniform personnel, and service civilian personnel have strong preferences, but they make up only 8 percent of the U.S. population; their views will not drive the results of national surveys. On the other hand, a recent Pew study found that 61 percent of survey participants reported having a close family member (defined as a parent, sibling, or child) who is a veteran or current service member.[47] Pew did not explore whether family members develop strong preferences for a particular service when a parent, sibling, or child has served, but it is worth exploring in future analysis. We think it more likely that other than immediate family of current service members and perhaps the relatively few communities with long ties to local bases, the connection between the military and American society at large has grown weaker since the end of the Cold War. That would help explain the convergence in attitudes toward the services.[48]

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[46] Data are from U.S. Department of Veteran Affairs, "Veteran Population," Washington, D.C.: National Center for Veteran Analysis and Statistics, 2014; and Office of the Deputy Under Secretary of Defense (Military Community and Family Policy), *2011 Demographics: Profile of the Military Community*, Washington, D.C.: Department of Defense, updated November 2012, p. iii.

[47] Pew Research Center, *The Military-Civilian Gap: War and Sacrifice in the Post-9/11 Era*, Washington, D.C., 2011, p. 66.

[48] James Fallows is among those who see this divide and argue that it is bad for the military and the nation. See James Fallows, "The Tragedy of the American Military," *The Atlantic*, January/February 2015.

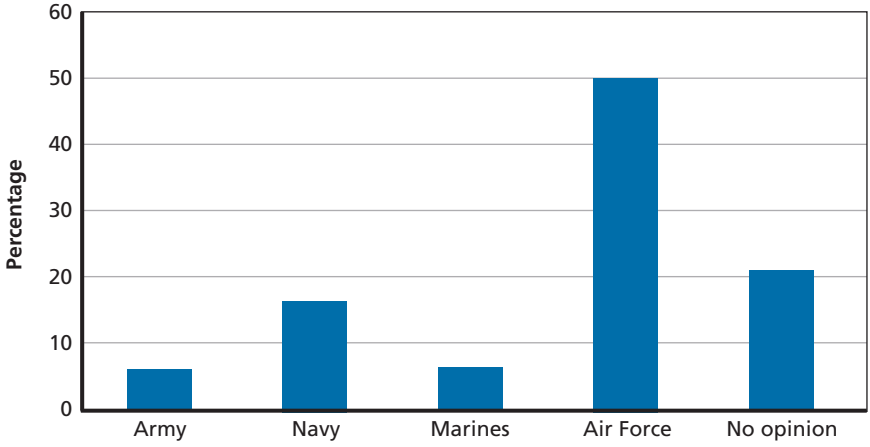
Which Service Do You Most Associate with Advanced Technologies?

The ALP also asked which service respondents most associated with advanced technology. This was an important question for the USAF, because its narratives typically emphasize technology, portraying the service as one that is constantly innovating and pushing frontiers. Whether it is a successful narrative or for other reasons, the public does strongly associate the Air Force with advanced technologies. Fifty percent of respondents chose the Air Force, with "no opinion" as the second place answer and the Navy in third place at 17 percent (see Figure 4.23).

Public Support for Air Strikes in Syria and Iraq, 2014

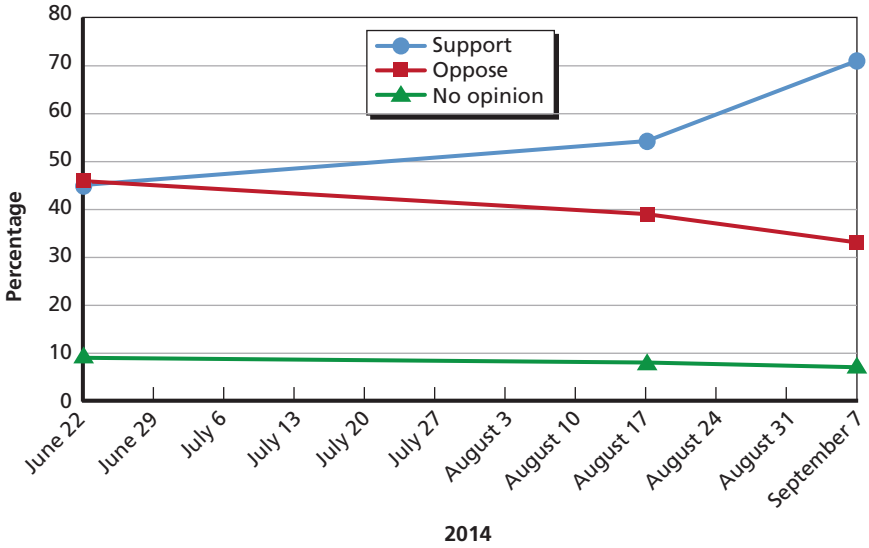
The final survey results presented in this study are from the summer of 2014. *Washington Post*/ABC News polling displayed in Figure 4.24 showed a significant increase in support for air strikes against Islamic State of Iraq and the Levant (ISIL) insurgents in Iraq between June and September. The first bump (from the June 22 to August 17 poll) may

Figure 4.23
"Which of Our Armed Services Do You Most Associate with Advanced Technologies—the Army, the Navy, the Marines, or the Air Force?"



SOURCE: RAND American Life Panel survey, April 7–May 9, 2014.
RAND *RR1044-4.23*

Figure 4.24
"Overall, Do You Support or Oppose U.S. Air Strikes Against the Sunni Insurgents in Iraq? Do You Feel That Way Strongly or Somewhat?"



SOURCE: *Washington Post*/ABC News polls, June 22, 2014; August 17, 2014; September 7, 2014.
RAND *RR1044-4.24*

be attributed to the fact that the United States had begun air strikes against the ISIL in Iraq on August 8. In previous operations, support for air strikes generally appeared to be higher once they were underway. The more significant increase in support is found in the September poll, when those "strongly supporting" air strikes went from 31 percent to 52 percent of responses. Net results in September were 71 percent supporting and 33 percent opposed. As of November 2014, there are no trend data for support of air strikes against ISIL in Syria, but the September 7 poll found a total of 65 percent supporting air strikes versus 28 percent opposed. The September increase may in part be due

to the August 19 ISIL videotape showing the beheading of American journalist James Foley, which caused outrage in the United States.[49]

As seen in surveys conducted during earlier operations such as Operation Allied Force, the public supports air strikes when they are underway, but also often expresses skepticism about whether U.S. objectives can be achieved without ground forces. As of late September, there appears to be only one poll that asked this question. A September 18–19, 2014, YouGov/*Huffington Post* survey asked "Do you think it is possible for the United States to effectively fight Islamic State insurgents in Iraq and Syria using air strikes only, without sending ground troops?" 30 percent responded yes, 40 percent no, and 31 percent answered "Don't know."[50] Although more respondents were skeptical that air strikes alone could defeat ISIS than believed they could, this result is much closer than was the case in most earlier polls.

Insights for the USAF

This chapter covered considerable ground, from 1935 surveys regarding the possible expansion of the U.S. armed services to 2014 air strikes in Syria. In this admittedly quick treatment of almost 80 years of USAF history, public enthusiasm for aviation and airpower was reflected in public opinion toward the USAF in the 1940s and 1950s. It is fair to say that the public did see airpower as the dominant military instrument in those days. Even as late as 1998 and 2001, the Air Force polled much higher than the other services, although the gap had shrunk considerably. That said, Operations Iraqi Freedom and Enduring Freedom caused a fundamental shift away from this air-centric view toward one that emphasized ground operations. It remains to be seen how the public will view military operations in coming years. The most pow-

[49] American journalist Steve Sotloff was beheaded on September 9, after the *Washington Post*/ABC News poll was taken.

[50] YouGov: What the World Thinks, *Poll Results, Iraq & Syria*, September 19, 2014. YouGov/Huffington Post survey of 1,000 U.S. adults interviewed September 18–19, 2014. Margin of error 4.3 percent.

erful trend in perceived importance of the respective branches of the armed forces was the steady convergence of views resulting in the services scoring almost equally in the 2014 polls.

Regarding public attitudes toward air strikes during ongoing operations, this review found that when American presidents ordered air strikes, the public was typically quite supportive. This was true in Vietnam (recall that the low support for air strikes was either prior to Rolling Thunder or after President Johnson had ordered a bombing halt), Operation Desert Storm, the Balkans between 1992 and 1995, Operation Allied Force, and Iraq/Syria in 2014. In those few cases where the public was asked whether the United States should send ground forces (or in the case of ODS, initiate the ground campaign), public support for the ground option was typically much lower. On the other hand, in those cases when surveys asked whether airpower would be sufficient by itself to achieve U.S. objectives or whether ground forces would be needed, the public consistently said that ground forces would ultimately be needed.

This suggests a fairly sophisticated and nuanced public view of airpower's role. The public recognizes that great utility of airpower as an independent, flexible, and low-risk military option and is much less hesitant to use it than to send ground forces. Yet, the public also recognizes that there are limits to what can be achieved exclusively by airpower (or any other single military instrument) and that more ambitious objectives usually require additional military capabilities, either provided by partner nations or by the other American military branches. Somewhat surprisingly, almost 30 years after the Goldwater-Nichols legislation forced a joint approach to warfare, public opinion polls have yet to explore popular attitudes toward jointness. "Equally important" selections may reflect a joint perspective, but that conclusion can't be supported until attitudes toward jointness are explicitly addressed in surveys.

CHAPTER FIVE

Conclusions

This study sought to understand the relationship between Air Force public narratives and popular attitudes toward airpower and the USAF. The preceding four chapters explored this relationship through three lenses: (1) the social currency of aviation and airpower, (2) Air Force narratives, and (3) public opinion toward the military services. We began by considering how flight captured the public's imagination in the early 20th century, describing the "golden age" of flight and documenting the rise and fall of aviation in popular culture. We then explored how Air Force narratives evolved over the past century, looking at the writings of the most prominent airmen and identifying key components of strong narratives. Finally, the study brought together 80 years of public opinion research to identify long-term trends in public opinion toward the military services.

Research findings and recommendations are presented below.

Findings

The Social Currency of Aviation and Airpower Was Uniquely High During the First Half of the 20th Century

Public opinion toward the Air Force was most favorable when aviation was at the center of popular culture and the public's imagination was captured by "the limitless future of the sky." The fascination with flight was arguably the first mass cultural phenomenon in the United States, enabled by the new media of radio and film. Dramatic rises in the social currency of aviation can be quantified between 1900 and

1920, well before American airmen began presenting their first public narratives. Average people identified with flight and aviators, they routinely discussed aviation matters with friends and family, they avidly sought and shared information about aviation, and many became aviation advocates. In short, aviation had exceptional social currency in the first half of the 20th century; during those years the public was predisposed to give airpower-friendly answers in polls. To be fair, energetic outreach by airmen and airpower advocates nurtured and sustained positive public attitudes toward the USAF, but it was publicity about real-world events and concrete accomplishments—improvements in aircraft, world-record flights, and performance in combat—that gave airpower its great social currency, not narratives, however carefully constructed. In short, airpower narratives rode the wave of popular enthusiasm; they did not create it.

The popular obsession with flight did not last. Ironically, as many of the aviation dreams became reality (e.g., safe, reliable, global travel by air), flight lost its mystery, adventure, and glamor. Other dreams became muddled or morphed into nightmares. In Korea and Vietnam, for example, the public perceived airpower as vital, but not decisive. And with the Soviet development of a large nuclear bomber and missile force, the nightmare of nuclear attack on the homeland became a real possibility, never fully removed by the strategy of deterrence. As aviation and airpower drifted away from the center of the public's consciousness or moved in darker directions, popular attitudes toward the USAF became more complex, mixed, and nuanced.

There have been spikes of public enthusiasm for airpower since the end of the Cold War, but the consistently high interest that the USAF once could take for granted has long passed. As a consequence, airpower has become routinized; the USAF is highly respected along with the other services but no longer is viewed as revolutionary or particularly newsworthy. Airpower's social currency today is primarily a function of its visibility in ongoing military operations and popular interest in new technologies such as drones, both of which are largely outside of USAF control.

Shortcomings in Airpower Narratives Are Not to Blame for Changes in Public Opinion Toward the USAF

When airmen come together to discuss the USAF's relative position among the services, its budget share, and its role in national military strategy, a common refrain is that the Air Force fails to "tell its story" in an effective manner. It is typical in such gatherings for earlier airpower narratives to be held up as exemplars of how the USAF should educate the public today. Usually implicit, but at times explicitly articulated, is the belief that if airmen would only proclaim airpower as boldly and unapologetically as Mitchell that public opinion would follow.

There is no evidence in the public opinion data to support the view that the decline in the number of survey respondents choosing the USAF as the "most important branch" can be attributed primarily to narrative failings. Public opinion toward the USAF peaked during the years when its social currency was highest and declined as airpower's social currency waned, not because of changes in narrative. The public perception of the USAF as the dominant service declined in the 1950s even though the narrative did not change. After the 1991 rout of Iraq and multiple successes in the Balkans, airmen presented an updated version of the "Victory Through Air Power" narrative; this was dominant from 1991 to 2003. But the new narrative did not bring polling back up to 1960s level and was unable to resist the change in social currency brought by 9/11 and, later, by the Iraqi insurgency. The USAF dropped in the polls in 2002, then plunged in the 2004 poll despite airmen largely holding to the new "Victory Through Air Power" narrative and well before "We Are Critical Enablers" became the official narrative in 2008. And that narrative fared no better: The USAF dropped again in the 2011 poll. These changes were driven by what the public was observing in these ground-centric conflicts, not by what airmen were saying. That isn't to say that narrative is unimportant, but at most it can capitalize on external conditions when they are favorable and, perhaps, mitigate their effects when they are less favorable.

The American Public Is Less Inclined to Distinguish Among Service Branches

The most striking and important trend in American public opinion toward the military services is the convergence in views between 1949 and 2014. In 1949, airpower was still riding high, strongly associated with the Japanese surrender and with the emerging concept of strategic nuclear deterrence. In a July 1949 Gallup poll, there was an 80 percentage point difference between those selecting the Air Force as the "most important service" and those selecting the Army. By 1960, this gap was still large but below 60 percentage points. When Gallup returned to this question in 2001, the gap had dropped to 30 percentage points. It declined steadily in the 2002, 2004, and 2011 polls. By 2014, the gap—now between the Army at top and Navy at bottom—was 9 percentage points, a remarkable change from 1949. This convergence began during the air-centric 1950s and has held constant during the ground-centric 2001–2014 period. The trend started during the "Peace Is Our Profession" narrative era, continued through the reprise of "Victory Through Air Power," through "We Are Critical Enablers," and into today's new (yet to be named) narrative era.

In keeping with this convergence, the survey answers are in some cases now falling within the sampling error, suggesting that the public is now divided almost equally in its service preferences. The steady convergence in views during both air-centric and ground-centric periods indicates an enduring trend away from a focus on any one type of military power that is well beyond the power of narrative to change. Although the Air Force could poll higher if, for example, there were a prolonged conflict or exciting new capability that showcased airpower, it is unlikely that the Air Force will ever again experience the levels of public enthusiasm associated with airpower's "golden age."

Recommendations

Explore Means to Increase the Social Currency of Airpower

As noted above, the USAF's social currency is driven primarily by real-world events, such as technological breakthroughs or military

successes—not by the writings of strategists, theorists, or military leaders. Social currency ultimately is about whether the public resonates with new technologies or capabilities and whether USAF contributions to ongoing operations are visible and appreciated. Neither is directly under USAF control. That said, there may be steps that the USAF can take to marginally increase the social currency of airpower and, in so doing, increase public receptivity for Air Force narratives.

The USAF already makes good use of contemporary outreach technologies, including a polished website; frequent tweets of stories, photos, and videos; and highly professional recruiting videos shown during NFL games and other prime-time events. In an information-rich society, however, it is not easy to break through the background noise and capture the public's attention, let alone its imagination.

One possible path to increased social currency would compare civilian technologies that are getting the most buzz in tech circles (as well as the broader public) with USAF research and development programs. The idea would be to identify those USAF programs that are most closely aligned with civilian technologies possessing high social currency and promote them in USAF media channels. This would leverage the greater visibility of civilian technologies just the way that early airmen capitalized on public interest in flight to advance military aviation. USAF leaders are already emphasizing advanced technology in outreach efforts, including the new "Breaking Barriers: America's Airmen" initiative that teams the USAF with *Wired* and *Scientific American* and offers a website focused on airmen pushing technological and operational frontiers; the research and development/civilian tech comparison would be a complement to such efforts.

Another path to increased social currency would rethink how the USAF presents information about its role in ongoing and recent operations. There are significant policy and security constraints on Air Force actions in this area that greatly limit USAF outreach options. Nevertheless, this may be a place where innovative approaches, such as animations, might better convey to the public what is happening or what happened in air operations than traditional reporting and targeting pod videos.

Even if such efforts do not pan out, they would be valuable as part of a broader USAF effort to understand popular culture and public opinion—a critical foundation for an effective public narrative.

Anchor USAF Narrative in Big Problems of Concern to the American Public

An effective airpower narrative must begin with a problem that matters to the nation. The classic airpower narratives all did this, presenting vexing problems that the public cared deeply about, whether it was avoiding another war in the trenches or preventing World War III. If the public is not interested in the problem as defined in the narrative (perhaps because it is overly narrow or abstract), then it will not be interested in the solution offered by the Air Force. As noted earlier in this report, a strong airpower narrative (1) presents a difficult and important problem, (2) offers a big idea describing how airpower can solve the problem, (3) has an emphasis on technology and innovation, and (4) ends with an aspirational vision for a better future.

It is most natural for institutions to build narratives inside-out, beginning with the most cherished internal themes and traditions. This makes for compelling internal narrative but often falls flat with outside audiences. A purely outside-in approach to narrative building is unsatisfactory as well, since it would be market-driven, unlikely to capture the entire airpower story, and would have little acceptance within the USAF. The early narratives, such as "Over Not Through," offer a useful model in how to integrate these competing imperatives into arguments that are compelling to both internal and external audiences.

Although valuable as models, airmen should not seek to duplicate the early narratives. No USAF public narrative can recreate the unique cultural conditions of the early to mid-20th century. Nor can earlier narratives be recycled for a contemporary audience; the style and substance are a poor fit for an information-rich society. A modern narrative can, however, help the public understand the contributions that airpower makes to U.S. national security today. To do that effectively, the narrative will need to be tailored to a popular culture that bears little resemblance to that of aviation's golden age.

Use Long-Term Public Opinion Trends to Inform the USAF Narrative

Whether simply divided in its preferences or moving toward an "equally important" perspective, the American public is much less inclined to see one service as dominant. This is a powerful trend that is unlikely to be reversed anytime soon. However much airmen may wish for a return to earlier times, when airpower was viewed by the public as the dominant military instrument, those times are gone. Narratives that are built on an out-of-date understanding of public opinion will fall flat.

Given this environment, how should the USAF engage the public? The USAF already articulates its unique contributions within a joint context, so more jointness is not necessarily the answer. Nor is a return to "Victory Through Air Power" likely to work with a divided and more skeptical public. Is there a third way? The current direction of USAF outreach themes emphasizing advanced technologies and innovation offers promise. It avoids the extremes of parochialism and bland jointness and is likely to resonate with a public that strongly associates the USAF with advanced technologies. Narratives that reinforce these themes are ideal because they are deeply rooted in Air Force history and traditions, are consistent with the current USAF vision, are plausible to the public, and offer the hope of breakthroughs that would matter greatly to the nation.

Final Thoughts

Airpower narratives have served multiple and varied purposes over the life of the Air Force. Some have sought to describe the foundations of Air Force culture, others have offered a CEO-style perspective on the structure and purpose of the institution. The best-known (and most controversial) narratives offered to solve a difficult national security problem through the innovative use of aerospace technologies.

This study sought to understand whether these public narratives drive public opinion. This analysis found that they have less impact than typically believed by airmen and airpower advocates. Rather, the social currency of airpower—affected most powerfully by high-visibil-

ity technological advances and ongoing military operations—has more impact on public attitudes toward the USAF.

Given this, does public narrative matter? The answer is an unequivocal yes, for several reasons. First, there are other influence pathways that this analysis did not assess, in particular the impact of public narratives on opinion elites, senior government officials, and elected representatives. Although public narratives appear to have marginal influence on public opinion, they may have much greater sway with these other audiences who are more directly involved in policy, programming, and budgeting decisions. Second, healthy organizations must have a logical, coherent, and inspiring explanation for new personnel acculturation as well as organizational pride and esprit. Nowhere is this more important than in military organizations, where the scale of sacrifice is potentially extreme. Finally, as Huntington noted 60 years ago, every governmental agency in a democracy has a responsibility to present a compelling case explaining why the public should devote scarce resources to funding its mission. What problems is it offering to solve? What unique contributions does it make on behalf of the nation? Aren't there alternative and potentially more efficient ways to accomplish these tasks?

Those questions can only be answered through a narrative that links what the institution does to what the nation needs.

Abbreviations

ALP	RAND American Life Panel
DoD	U.S. Department of Defense
GML	Give Me Liberty
GV/GR/GP	Global Vigilance, Global Reach, Global Power for America
ICBM	intercontinental ballistic missile
IRBM	intermediate-range ballistic missile
ISIL	Islamic State of Iraq and the Levant
ISR	intelligence, surveillance, and reconnaissance
JDAM	Joint Direct Attack Munition
ODS	Operation Desert Storm
OEC	Operation Eldorado Canyon
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
ONT	Over Not Through
OOD	Operation Odyssey Dawn
OUP	Operation Unified Protector

PIOP	Peace Is Our Profession
SAC	Strategic Air Command
USAF	U.S. Air Force
VTAP	Victory Through Air Power
WACE	We Are Critical Enablers

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This report examines the evolution and interaction of U.S. Air Force narratives and popular attitudes toward civil and military aviation over the past century—from the "golden age" of aviation in the first half of the 20th century, when flight and airpower captured the American public's imagination, to 2014, when aviation had long since become taken for granted. The study first examines the social currency of aviation and airpower, drawing on a historical review, the frequency with which airmen appeared on the cover of *Time* magazine during the period, and the frequency with which airpower and aviation concepts appeared in books. It then examines Air Force narratives, including the Air Force's origin story as well as the dominant ideas uniting the organization at various points in its history. Finally, drawing on polling data from more than 50 opinion surveys conducted over the past 80 years, the study traces the evolution of the American public's attitudes toward the Air Force since 1935.

The American public today does not view airpower or the Air Force with the same fascination and enthusiasm that it did during the "golden age" of aviation, but the report concludes that shortcomings in Air Force narratives are not to blame: Airpower's enormous social currency during the first half of the 20th century was due to real-world events and technological advances, not narratives. However, the report emphasizes that an effective narrative is still important as a means to help the public and key decisionmakers understand the contributions that airpower makes to U.S. national security today, and offers recommendations for the Air Force in this regard.

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