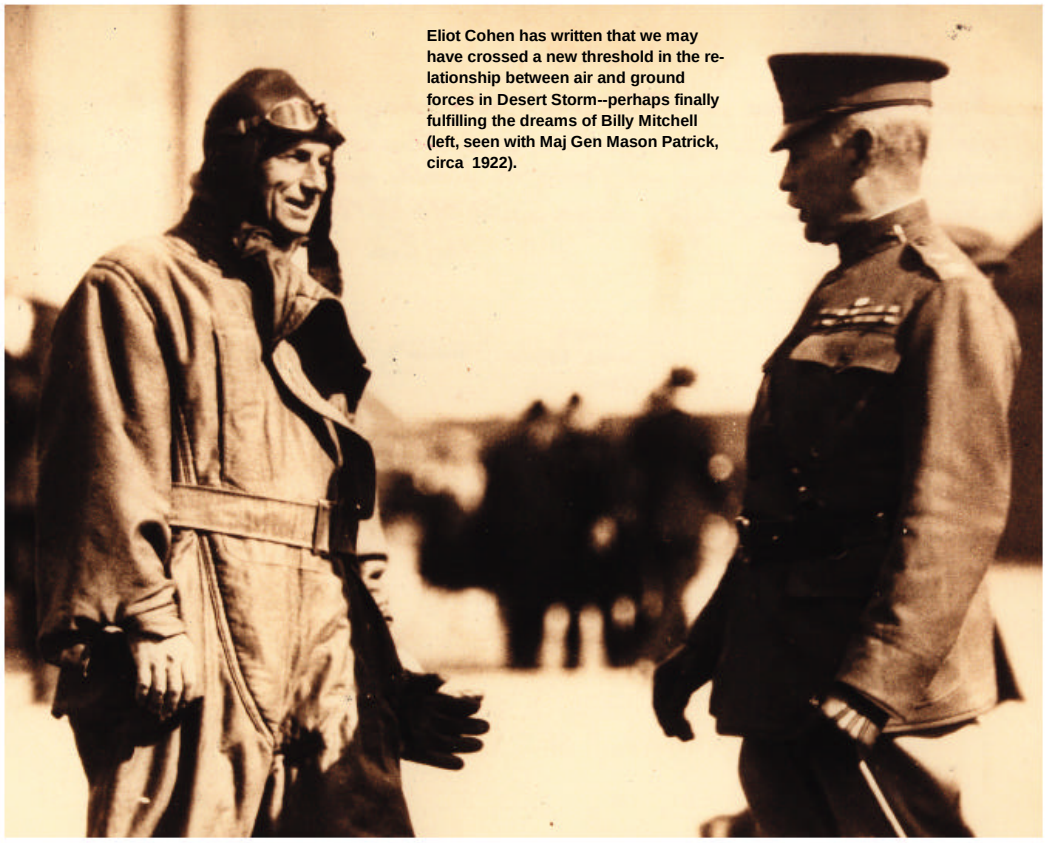
BOMBER BARONS, BUREAUCRATS, AND BUDGETS

Your Professional Reading on the Theory and Doctrine Of Strategic Air Attack

DR DAVID R. METS

THE SPRING 1993 issue of this journal contained an article titled "The Douhet Society: A Recipe for Your Professional Development Program?" In it, Lt Col Kimble D. Stohry advocated the formation of a kind of great books discussion group for the unit level to stimulate Air Force professional reading programs. It is a great idea. One sample of a similar idea currently in operation is among School of Advanced Airpower Studies (SAAS) graduates who organized a Mitchell Society at the Air Staff and interested others in participating. A sort of precedent for them was the mentorship of Gen Fox Conner for Maj Dwight Eisenhower in the 1920s. That, too, was built around the reading and discussion of the military classics.[1]



Eliot Cohen has written that we may have crossed a new threshold in the relationship between air and ground forces in Desert Storm--perhaps finally fulfilling the dreams of Billy Mitchell (left, seen with Maj Gen Mason Patrick, circa 1922).

Strategic Attack: A Unifying Vision

Carl H. Builder, in *The Icarus Syndrome: The Role of Air Power Theory in the Evolution and Fate of the U.S. Air Force,* has complained that for all the years from the First World War through Sputnik, the Air Force was blessed with a firm vision of what it was about. He asserted that the notion of strategic bombing against industrial vital centers as a possibly decisive factor in wars was a unifying factor of the first order. But since Sputnik, according to Builder, the Air Force has lost its way. The unifying vision is badly eroded, and it needs a new one—a new theory of airpower.

Whatever the merits of Builder's argument, the evolution of the theory and doctrine of strategic attack would certainly provide a useful organizing theme for your local Mitchell Society or personal professional reading program—or a mentorship program. Any or all of them would be small steps toward removing the Builder complaint and, more generally, the erosion of the Air Force's image of anti-intellectualism. There can hardly be any doubt that strategic attack was the bread-and-butter mission that justified the founding of a separate air force in the first place. The five books at hand are all related to that subject in the years since Hiroshima, and they form the building blocks of this review/article. The essay also aims to serve as one tool for the planning of mentorship efforts.

Professors still debate fiercely the causes of the Japanese surrender. But the promptness with which the surrender came after the first use of nuclear weapons led many to make inferential leaps about their decisiveness. But the *US Strategic Bombing Survey (USSBS)* asserted that the Japanese had already been defeated by the submarine blockade and the conventional bombing when the atom bombs were dropped. The dawn of a new era of strategic study nonetheless followed, and the debate continues still.

The Phases of the Cold War

The immediate postwar period was characterized by great hopes that were soon dashed. The United Nations would do much better than had the League of Nations, for the world had learned a second grim lesson. Further, the economic roots of the Communist Revolution, the Depression, and the Second World War would not be relevant in the future because an era of free energy would come from atomic science that would make the whole world prosperous as well as peaceful. Unhappily, this era of US nuclear monopoly had a very short half-life.

The USSR exploded its first nuclear device in 1949, long before most people thought it would happen. Still, the West had an enormous lead in the delivery capability for atomic weapons, which was thought to guarantee security and peace for at least a while—the time of the massive retaliation hegemony. But even at the beginning of his administration, President Dwight Eisenhower understood that this hegemony could not be counted on very long to bring peace and balanced budgets. As John Kennedy came to office, it was clear that nuclear parity was not far off. Something akin to parity existed from the closing years of President Lyndon Johnson's administration until the collapse of the Iron Curtain in 1989. Even so, the fears of a nuclear holocaust are not gone, for nuclear proliferation could conceivably cause the horror so long avoided.

Our array of books, then, begins with one by William S. Borgiasz that discusses the principal instrument of the US monopoly and its subsequent hegemony.

The Strategic Air Command: Evolution and Consolidation of Nuclear Forces, 1945—1955 by William S. Borgiasz. Praeger Publishers, 88 Post Road West, P.O. Box 5007, Westport, Connecticut 06881-5007, 1996, 158 pages, $49.95.

The first in a new breed—a B-47 with jet-assisted takeoff (JATO) undergoes testing at Edwards AFB, California.

Against a formidable potential enemy, the Strategic Air Command, with inadequate funding, personnel, bases, intelligence, and technology, employed extreme dedication and superb leadership to achieve the deterrence mission despite the impossible odds. That is only a little exaggeration representative of the central message of the book.

William S. Borgiasz resides near Washington and is listed as an adjunct professor at the Northern Virginia Community College. His PhD is from the American University, and the book is a retread of his dissertation. In fact, it is clear that there was not much significant change made for the book, and many defects typical of a dissertation remain. Borgiasz worked for perhaps two years in the Office of the Chief of Air Force History, and he cites many of the experts there in his acknowledgments. *The Strategic Air Command: Evolution and Consolidation of Nuclear Forces,* 1945–1955 travels a well-worn path, but might nevertheless have been a useful book. The concept for its organization is good, starting with the general and proceeding to the particular—national strategy development at the dawn of the nuclear age in the first two chapters, and then on to some of the details of the principal instrument of that strategy. These details are described in the next four chapters on personnel policies, maintenance, the building of the B-47 and then the B-52 force structures, and intelligence. The conclusions are predictable and suggest a naive, uncritical handling of the sources.

The Strategic Air Command was born weak and remained so for a few years before increased funding, vigorous leadership, improved personnel policies, growing aptitude in aircraft acquisition, and hesitant progress in intelligence and targeting resulted in achieving the mission. That is Borgiasz's view, and there is little therein that would have been found offensive in the public affairs office at Offutt Air Force Base.

But there are so many simple mistakes throughout the work as to cast doubt on the reliability of the whole. The third word in "Air Force Materiel Command" is variously spelled throughout the book—sometimes appearing as both *Materiel* and *Material* in the same paragraph. The USAAF becomes US Army Air Force instead of *Forces*. That may seem like nit-picking, but there is a point when the sum of nits becomes serious. Added to this is a curious ineptitude of expression—leading to confusion in some cases and amusement in others. The author speaks of an airplane's "rear tail," making one wonder what a front tail would look like. He is constantly careless about figures that should contain the units of measurement if they are to have meaning. He speaks of the K-2 bombing system's 70 percent failure rate—without specifying whether it is per mission, per week, per month, per year, per war, or what. The limitations of the research are further demonstrated by such things as speaking of the B-1 replacing the B-52 as if it were about to happen and calling the Air Force Systems Command (AFSC) a "center" instead of a "command."

There are methodological faults throughout, one conspicuous one in the bibliography being the inclusion of the memoirs of folks like Dean Acheson, James Killian, George Kennan, and the *Eisenhower Diaries* under "Secondary Works." That suggests that the author classifies printed sources as secondary and unprinted ones as primary. It appears that he simply did not receive the editorial support that would have removed a host of errors like that.

The Strategic Air Command is published by one of the most prestigious publishing houses in America, which has a specialty in national security studies. The book is so faulty as to suggest that the publishers need to reconsider their arrangements for refereeing and editing manuscripts for publication. Meanwhile, the national security scholar need not include this work on his or her reading list.

Borgiasz carries the story up to the middle of the American hegemony. Our next author covers the same time but is focused on the British acquisition of a nuclear force.

This F-111 is carrying the 4,700-pound GBU-28, one PGM that in combination with stealth and other technologies may be causing a revolution in warfare.

The Bomber in British Strategy: Doctrine, Strategy, and Britain's World **Role**, 1945–1960 by S. J. Ball. Westview Press, 5500 Central Avenue, Boulder, Colorado 80301-2847, 1995, 246 pages, $59.95.

The Bomber in British Strategy tells an interesting story about a set of national dilemmas. Should the United Kingdom avoid a continental commitment, or should it concentrate on sustaining the British Empire? Should it depend on the alliance with the United States within which it fought two successful world wars, or should it assert its independence and great power status? Should Britain see to its security through deterrence via nuclear weapons or via conventional weapons in a war-fighting alliance with its noncommunist friends on the European continent?

Simon J. Ball is a graduate of Oxford University. He earned his doctorate at Cambridge and now teaches at the University of Glasgow. On the surface, it appears that he is a young scholar, as neither the Air University Library catalog nor *Books in Print* shows that he has any other published works, and the one at hand does give the appearance of a converted doctoral dissertation. The writing style is adequate, but the narrative goes into excruciating detail that makes it somewhat dreary reading. The primary source documentation leaves little to be desired, and the secondary sources seem adequate though naturally focused for the most part on those published in the United Kingdom.

The Bomber in British Strategy is in general organized into chronological chapters, each covering a similar set of issues. It begins with the immediate postwar period, which was necessarily one of great adjustment for Great Britain. It concludes when the adjustment was fairly complete in 1960 at the twilight of the period of US nuclear hegemony. American readers will be at home with much of it. Many of the same issues were driving the making of strategy in both countries, and one of the premier works on American decision theory, Graham T. Allison's *Essence of Decision: Explaining the* Cuban Missile Crisis, is recognized in Ball's work and was an obvious influence on it. Ball convincingly claims that both rational strategic logic and bureaucratic interests affected British policy and strategy in countless ways—and neither is alone sufficient to explain the outcomes.

One of the parallels in British and American strategy making had to do with the desire to use nuclear weapons as an economy device to bring

the budgets back into balance in the aftermath of World War II. There was the hope in both countries that modest nuclear forces could yield the same security and support of the other national interests as could much larger conventional forces. The Royal Air Force (RAF) had already decided that it would need to build a major strategic bomber force before the coming of the nuclear bombs; and when they did come, they enhanced the airmen's arguments for that bomber force. So, too, in America. There, the Seventy Group Program had its origins before Hiroshima among people who did not know anything of the potential for atom bombs. Also, just as Ball explains in the case of Britain, both the Army and Navy in America found many good reasons why national security could not be founded upon nuclear weapons—or at least not wholly so. But getting big bomber forces (or any military forces) funded in the postwar period was worse than pulling teeth.

The coming of the first Soviet nuclear explosion in the fall of 1949, and especially the outbreak of the Korean War the following summer, unlocked the gates of the treasuries in both the US and Britain. But Simon Ball explains that then and thereafter there was a tension between the justification of the RAF nuclear bomber force for the sake of deterring the newly credible Soviet threat in the NATO area or for war fighting in the peripheral areas away from Europe—or in both. Similarly, in America the Joint Chiefs of Staff were carefully limiting the forces that they sent to Gen Douglas MacArthur because of the perceived need to save the best for deterrence and for building up the NATO forces. The B-29s were sent to Korea in substantial numbers, but the B-36s, B-50s, and the anticipated B-47s were to be held back for use against the main threat—the Soviet invasion of western Europe.

The Bomber in British Strategy well explains that the British bombers had one purpose with no exact counterpart for the American planes—to influence the policy of the other English-speaking ally. Even at the end of World War II, there was genuine concern in Europe, and especially in Britain, that the United States would shrink back into its isolationist shell. So, the RAF argued that a major bomber force was necessary in order to persuade the Americans that the British were indeed serious about the collective preservation of security in Europe and were not trying to get Uncle Sam to pull English chestnuts out of the fire. It also argued persuasively that the bomber force, with its nuclear weapons, was necessary to convince America and the rest of the world that the United Kingdom remained a great power, one to be reckoned with and one that could guarantee the American nuclear deterrent force's involvement in European security by the maintenance of a somewhat independent center of nuclear decision making in London.

In the end, Ball shows that the Royal Air Force won its struggle—to some extent, anyhow. It did get its big bomber force, though it did not get on the line until the late 1950s when its days were already numbered. It did help sustain the focus of British policy on the NATO scenario. It did successfully defend itself against the efforts of the British army and navy to reduce its influence and its force structure. Whether it also was significant as a part of the deterrence of Communist aggression is probably unknowable, and though we do know that the United States remained engaged in Europe for the next half century, it is equally unknowable whether that would have happened even without the RAF and its Bomber Command.

The Bomber in British Strategy is a competent piece of work. Although its author recognizes the importance of the bureaucratic factor, he deals with the strategic arguments to a much greater degree—and that is regrettable, for a more extensive treatment of the former might have yielded important insights that would have helped the American reader understand our own interservice bureaucratic wars. The book goes into far more detail on the rational side of British strategy making than is needed by the typical reader of *Airpower Journal*. So, unless you have a special interest in British foreign and national security policy, you need not give this good work a high place on your reading list. Probably most libraries having a strategy orientation will want to acquire the book, but its very high price is prohibitive for the personal professional libraries of serving officers.

We have noted that President Eisenhower himself knew that US nuclear hegemony could

not be forever preserved. The roots of the Kennedy flexible-response strategy were appreciated by a few in his administration. But the Bay of Pigs and Cuban missile crises during that administration made it transparent that the US could no longer act with the confidence it had shown since Hiroshima.

David Sorenson's book is next, and his three case studies span our entire story: one is from the monopoly phase, one from the time of hegemony, and one from the era of nuclear parity. As we moved from the monopoly toward the end of the hegemony phases, the Soviet acquisition of a formidable strategic force increasingly presented us with a dilemma. The president feared that he would be faced with a choice between being nibbled to death by conflicts in the peripheral areas or bringing on a nuclear conflict that would make everything meaningless. In the West, bombers were increasingly unusable in an active way for coercion and were limited to the passive role of deterrence.

The Politics of Strategic Aircraft Modernization by David S. Sorenson. Praeger Publishers, 88 Post Road West, P.O. Box 5007, Westport, Connecticut 06881-5007, 1995, 234 pages, $59.95.

The main drivers of bomber-acquisition decisions seem to be the imperatives of strategic logic. The other conditioning factors include the reactions to armament choices on the other side of the cold war, bureaucratic interests arising largely from interservice rivalry, congressional politics, technology push, and the need to avoid the erosion of the defense industrial base. That is David Sorenson's message. Cynics will scoff at the idea that bombers were in the main a logical answer to strategic problems; others will agree with Sorenson but wonder whether this is the same old dog biting the man.

Dr David S. Sorenson was born during World War II and is now a tenured professor at the Air War College at Maxwell AFB, Alabama. He was an enlisted man in the US Navy during the 1960s and taught for some years at Denison University. He earned his doctorate at the University of Denver in 1977. His dissertation there was about military construction and models that might explain decisions in that area. He also has worked as a research associate at Ohio State University's Mershon Center. He arrived at the War College in 1991, and the work at hand seems to be his first book, though he has had several articles published in military journals.

Sorenson uses three case studies in the attempt to infer generalizations on armament acquisition that would enhance our understanding of the process in the hopes of improving it. Wisely, he qualifies his work by asserting that any such inferences could never be definitive, much less so because of being based on but three case studies, all on bombers at that. Even the choice of these cases was necessarily arbitrary: the B-36, the B-52, and the B-2. One interesting point he emphasizes is that the first two were designed, developed, tested, and procured in the era when the uniformed military had the paramount voice in most of the choices involved. However, the process was transformed in the McNamara period so that the military influence was diminished and the civilians in the Department of Defense became the main drivers. Too, it was at about the same time that the appropriation processes in the Congress were so changed as to give its members much more of a role in the oversight of the details. To some extent, that is but a restatement of the obvious, but interesting nonetheless. More novel is Sorenson's argument that the military-dominated process resulted in a more rational selection and in more effective design and procurement than has been the case since civilians took charge.

In Sorenson's arguments relating to the inferiority of civilian-dominated acquisition efforts, he is on shaky ground. The only case in the latter era he covers is the B-2, and that story is not over yet and much of the documentation remains classified. The selection of cases, in addition to being a small sample, has a disproportionate effect on that inference. What if the B-50, B-58, B-70, FB-111, and B-1 had been included? What if the experience of other nations, like the United Kingdom and (now that the Soviet archives are beginning to be opened) the USSR, had been used for comparative purposes? Doubtless the author would immediately see the difficulty: one life-

The long-lived B-52—here in prototype at Edwards AFB, California. Sorenson suggests that its success is due to the military-dominated acquisition process of the 1950s.

time is not long enough to cover all that, but that being so, a work like this must remain highly uncertain. Many full-length books have been written about just one of Sorenson's cases—the B-36.

The Politics of Strategic Aircraft Modernization is about decision making. Yet it does not seem to build much upon the rich political science literature in that subfield. The classical work in that area, Graham T. Allison's *Essence of Decision*, uses the Cuban missile crisis as a single case to explore the subfield, and it is one of the most cited works in America. However, that book does not appear in the bibliography of this work, nor do the ideas from it or its critiques seem to inform the substance of this work.

Understandably, Dr Sorenson is clearly more comfortable with the period since 1945 than theretofore. Yet, there are many, many mistakes of substance throughout the work that would have been cleaned out by a competent military editor with some aviation expertise. (Billy Mitchell's *Ostfriesland bombing* tests are moved to 1922 at one place but remain in 1921 in another; the *Strategic Bombing* Survey calls airpower the decisive factor in the defeat of Japan [it really does not], though in another place the book allows the submarines a role; the Air Force's pride-and- joy tank killer, the CBU-97, is transformed into an antipersonnel bomb; in a book about acquisition, the name of the Air Force Materiel Command is written incorrectly in all of the hundreds of cases where it is used; and worse, Secretary of the Air Force Sheila Widnall's name is misspelled the single time it is used.) Further, there is an infelicity of expression and a host of English errors that good copy editors would have removed. Clearly, Sorenson was not well served by the Praeger editorial staff. Unhappily, there are so many of these errors that singly would be inconsequential that they in the end tend to undermine the credibility of the whole.

I suspect that the publisher is taking advantage of the standing orders of university libraries all around America by denying this and other works the editorial effort they deserve. The list price prohibits its acquisition for your personal library, and *The Politics of Strategic Aircraft Modernization's* credibility is not enough to warrant a high place on the Air Force professional officer's reading list. As for the librarians, they owe it to the taxpayers and tuition payers to reconsider their standing order policies.

The Approach to Nuclear Parity

Ball's bombers and Sorenson's B-52s were just coming on the line as the growth of the Soviet intercontinental ballistic missile force was making it increasingly difficult to use them in any active role. The Cuban missile crisis was often cited as a success story for the coercive use of nuclear bombers. But the frustrations of Vietnam soon demonstrated the shakiness of that proposition. As Mark Clodfelter has well demonstrated in *The Lim*its of Airpower: The American Bombing of North Vietnam, President Johnson's concern was that the pressing of what was called strategic bombing (with conventional weapons) would cause Chinese and Soviet intervention. That was a principal factor preventing a decision. Johnson feared it might well lead to nuclear war, which would be a solution worse than the problem, far worse. This, according to Terry Terriff, was also a source of anxiety in the Nixon administration, which thought the outcome would undermine the confidence of our NATO and other allies in the validity of our nuclear guarantee. The president still seemed to face a choice between surrender and nuclear annihilation. Flexible response had tried to get around the dilemma by building up conventional forces. As Terriff shows in our next work, the limited nuclear options idea was in part yet another attempt to solve the dilemma, this time with the use of nuclear weapons for less than total war.

The Nixon Administration and the Making of U.S. Nuclear Strategy by Terry Terriff. Cornell University Press, 124 Roberts Place, P.O. Box 250, Ithaca, New York 14851,1995, 252 pages, $35.00.

The Nixon administration entered office in January 1969, which was a time of great trouble. The US was nearing its humiliation in Vietnam. It was obvious that the American public would not support long, bloody, and expensive overseas wars for any but the most grave reasons, and the Soviets were clearly approaching full nuclear parity. As Terry Terriff describes it, the new regime met these changes with new policies, including the Nixon Doctrine, the completion of the withdrawal from Vietnam, the Strategic Arms Limitation Treaty (SALT) I, the shifting of domestic spending priorities, and a significant change of nuclear targeting policy. The last was declared to be the outcome of new strategic conditions associated with our NATO alliance. However, the theme of The Nixon Administration and the Making of U.S. Nuclear Strategy is that the real motivations were somewhat different than those declared. Terriff does agree that the strategic factors were the main drivers, but the concerns were broader than merely the reassurance of the NATO allies of the constancy of the US nuclear guarantee to their safety. Further, there were many other factors like bureaucratic, financial, political, and technological imperatives that conditioned the structure of the new policy and the way that it was sold to the Congress, the public, and the NATO allies. In fact, his assessment of priorities among motives is similar to that of Dr Sorenson—the primary one being the imperatives of strategic logic, but many other variables had an impact.

Terry Terriff is a young scholar who was born in 1953. He did a part of the research for this book at King's College in London and is now a senior research fellow at the University of Calgary, Canada. He was the coeditor with Ivo H. Daalder of *Rethinking the Unthinkable: New Directions for Nuclear Arms Control,* published in London in 1993. He is blessed with a good writing style, and he seems to have been well supported by competent editors in the preparation of a clean and technically correct manuscript.

There were four main groupings that had an influence on the development of a new strategic targeting policy that came to be known as limited nuclear options. One was the National Security Council, which was largely dominated by Henry Kissinger. Two of the other groups were parts of the Department of Defense—one civilian, centered on the Office of Systems Analysis, and the other the uniformed military, led principally by the Joint Chiefs of Staff. The remaining group was composed of the concerned parties from the State Department.

The motivations of each of these groups were somewhat different than those articulated by Secretary of Defense James Schlesinger. He had first achieved an internal consensus and then took the new policy proposal elsewhere to try to sell it to the other bureaucracies, the Congress, and especially the European allies. He made much of the need to couple the US nuclear deterrent to the security of NATO Europe, for example. But few of those who had developed the new policy had been principally motivated by that concern. Henry Kissinger, for example, is said to have been much more interested in having usable military power for conflicts with the USSR all around the periphery. He could not count on our conventional power there not only because of the post-Vietnam drawdown and public disillusionment, but also because of its concentration in the European arena. But under the strategic targeting policy inherited from the McNamara years, there did not seem to be enough flexibility in the plans for nuclear options to credibly threaten the use of even a few such weapons in peripheral ar-

The B-2 may be the last in a series of strategic air-attack aircraft or the first of a new breed.

This gaping hole in an Iraqi bunker provides a typical view of coalition command of the air. MAJ MASON CARPENTER

eas where the national survival was not clearly at stake.

The strength of Terriff's analysis has to do with the process more than the substance of the debate. He discusses, in order, the genesis of the desire for innovation, the internal processes within the Department of Defense for developing a consensus, the effort to recruit the support of the other bureaucracies of the federal government, and, finally, the winning of the support of the Congress and the allies. The urgency of nuclear targeting will doubtless seem of limited relevance to the modern reader now that the cold war appears to be over. But the process of developing major new defense policies is of enduring interest to the readers of *Airpower Journal.*

Terriff is erudite and articulate and does a rather impressive job of analyzing that process. His arguments seem sound, though the purists among us will wince at his method of citation. He argues that many of his sources wished to remain anonymous, apparently because they are still active in our political life. Thus, he has granted anonymity to most of them and we wind up with many of the citations attributing the ideas and factual details to interviews with unnamed officials of the National Security Council, the Office of Systems Analysis, or whatever. Still, Terriff's argument is coherent, and the case study does explain much about the way that our government worked at a high level. That makes his work useful, if not urgent, reading for the practicing Air Force professional. Libraries with an emphasis on national security or political decision making will want to acquire it for their collections.

Nowadays, the idea that large numbers of officials at the highest levels would spend endless hours seriously debating the nuances of using nuclear weapons in place of rifles seems quaint or even a little bizarre. How did we depart that fearsome world and return to one wherein the debate

is about strategic bombing with conventional weapons?

The Twilight of the Cold War and the End of Nuclear Parity

Afghanistan and the Soviet adventures in noncontiguous areas of sub-Saharan Africa, among other things, led to the cooling of the détente which had characterized international relations in the wake of the end of the Vietnam War and the conclusion of the SALT agreements. At first, both seemed to portend big trouble for the West. But as time passed, the Soviets discovered the difficulties of both counterinsurgency in Afghanistan and distant operations in Africa. All this contributed to a change in outlook in both Washington and Europe that caused President Jimmy Carter to start to restore US military power and to persuade the NATO allies to promise to follow suit. That tended to prevent the Soviets from finding the resources to see the conflict through in Afghanistan by a drawdown in either the Warsaw Pact forces or their own strategic nuclear units. All the while (it now appears) the Soviets and Eastern Europeans were stretching their social and economic fabrics ever tighter. Though hardly anyone in the West forecast it, the whole structure began its collapse in 1989. The Berlin Wall came down, and the cold war was over. The threat of nuclear war was much diminished, or so it appeared.

The Gulf War and a Revival of Nonnuclear Strategic Air-Attack Theory

Just as *USSBS* served as the springboard for the cold war debate on strategic air-attack theory and doctrine, the *Gulf War Air Power Survey* (*GWAPS*) promises to serve the same function in the new world ahead. Our last book is a slightly revised version of the *GWAPS* summary volume:

Revolution in Warfare? Air Power in the Persian Gulf by Thomas A. Keaney and Eliot A. Cohen. Naval Institute Press, 2062 Generals Highway, Annapolis, Maryland 21401, 1996, 344 pages, $38.95.

The short answer to the question in the title is a qualified yes; a slightly longer answer is as follows:

> But if air power again exerts similar dominance over opposing ground forces, the conclusion will be inescapable that some threshold in the relationship between air and ground forces was first crossed in Desert Storm.

The pages of the US Naval Institute's *Proceedings* have seldom been free of partisan views of airpower. But the publicity accompanying this book refers to it as "impartial" and it is to the institute's credit that it has published the tome with that kind of statement. (I know that there are those in the Air Force who were not satisfied with the parent *Gulf* War *Air Power Survey* and that the authors use *airpower* in its larger sense to include naval, marine, US Army, and coalition air forces.) Nonetheless, it is a powerful suggestion that we may be nearing the dawn of a new day in warfare.

When Secretary of the Air Force Donald Rice commissioned the *Gulf War Air Power Survey*, there were immediate worries that it would never reach the status that has been achieved by World War II's *USSBS*. In the first place, it was sponsored by the Air Force, whereas *USSBS* had been commissioned by the president himself—albeit originated by people associated with the US Army Air Forces. In the second place, the *GWAPS* staffing seemed to have a greater increment of folks who had Air Force backgrounds than was the case with *USSBS*.

Notwithstanding the roots of the *GWAPS* in the Air Force, its head was from academia and is

A Shoestring Primer on Strategic Attack Theory and Doctrine

World War II Background. In spite of the utter decisiveness of Allied victory, there was no consensus on the impact of strategic air attack on the outcome—notwithstanding the nukes that the pioneer theorist of the nuclear age, Bernard Brodie, asserted had corrected the mistakes of Giulio Douhet. The US, led by Bernard Baruch, made an ineffective stab at establishing nuclear arms control in 1946, and SAC was then established.

The Era of American Monopoly. American leaders little doubted that nuclear technology would spread but thought it would take longer than it did. President Harry S. Truman wanted to overcome the economic bite of World War II by using the nuclear monopoly to escape the high costs of conventional military power and thus balance the budget and pay the national debt—and avoid the depression Moscow said was imminent. But the 1949 Soviet nuclear explosion and the Korean War ended that hope.

The Eisenhower Massive Retaliation Hegemony. America came out of Korea much disillusioned with the idea that the demise of Nazism and Japanese imperialism plus the coming of nukes would guarantee "One World Built on a Firm Foundation of Peace" for evermore—and with the outcome of the Korean War, which it vowed never to repeat. Notwithstanding the Soviet nuclear explosion, the US still had an enormous lead in delivery systems that it hoped would deter future Koreas or at least terminate them in the incipient stages through nuclear attacks on the Communist heartland. SAC was transformed from the "hollow threat" of the B-29s to the fearsomeness of a B-52 retaliation force—security *and* a balanced budget.

Approaching Parity: The Kennedy/Johnson Balance of Terror. Many in Europe and the US Army argued that massive retaliation would not survive the coming of full-fledged Soviet nuclear power, and the Kennedy administration agreed. It added flexible response and renewed pressure for ICBM and nuclear-weapon development to the national strategy to reassure NATO that the nuclear guarantee extended across the spectrum of conflict—and made some hesitant steps toward a renewed quest for arms control. Some have argued that the Cuban missile crisis was a trauma that convinced the Kennedy men that graduated military threats work and the Khrushchev men that they had to close their nuclear missile gap to avoid future humiliations. They did close it, and the balance of terror was fully matured. What was called strategic attack in Vietnam used only conventional weapons.

The Hesitant Dawn of Nuclear Parity. Vietnam disillusioned America in many ways, but it was not free for the other side of the bipolar world. That was one of many things conducive to a moderation of the cold war and the revival of the prospects of nuclear arms control. One result was détente and the ratification of the SALT I arms control agreements by both sides. The future seemed brighter, but Watergate and Afghanistan made it look like a false dawn to both. The Senate refused to ratify SALT II, but Afghanistan and many other things (it now appears) were badly tearing the USSR's social and economic fabric. In the US, they said the "Fighter Mafia" unseated the "Bomber Barons."

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A Shoestring Primer on Strategic Attack Theory and Doctrine
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The Twilight of Nuclear Parity. The Reagan administration undertook a massive expansion of US military power and more elaborate arms control agreements ensued—followed by the collapse of the Communist empire. Again, cause and effect were debated endlessly, but the disappearance of the bipolar world was clear enough—though whether the replacement was to be unipolar or multipolar was debatable. Many feared that at the end of the day, nuclear proliferation would bring on the holocaust so long denied. Some would say cold war deterrence worked; flexible response in Vietnam did not.

The Dawn of a New Era of Human Conflict? Still, the yearned-for "One World Built on a Firm Foundation of Peace" seemed as far away as ever. Some argued that Desert Storm was the last of the old-style wars—that the drug cartels and potential Mao Tse-tungs would learn from Saddam Hussein's experience and return to less direct efforts to undermine the security, prosperity, and balanced budgets of Western civilization. Others asserted that Desert Storm proved that the various high-tech dimensions of airpower, if properly understood, would indeed be the foundation of one more century of peace and prosperity—a Pax Americana in place of the ancient Pax Britannica.

one of the authors of the present work: Dr Eliot A. Cohen. He was educated at Harvard and is currently a distinguished faculty member of Johns Hopkins University. A military historian, his most successful book heretofore seems to be *Military Misfortunes: The Anatomy of Failure in War* (1990), which he coauthored with John Gooch. Dr Cohen is well versed in airpower affairs among other things, having frequently been a speaker and discussant at the various colleges of Air University. His coauthor in the present case, Col Thomas A. Keaney, provides a nice blend of academic expertise, teaching experience, and practical military work. His PhD is from the University of Michigan, and he has taught history at his alma mater, the Air Force Academy. He has combat experience in the forward air control business in Vietnam and also commanded a B-52 squadron, which was selected for the annual award as the best bomber unit in the Strategic Air Command while he was squadron commander. He was one of Cohen's major assistants in the writing of *GWAPS* and now teaches at the National Defense University. The two authors are indeed a pair of scholars whose views demand attention.

In the Winter 1995 issue of *Airpower Journal*, I asserted that those who would aspire to become Air Force professionals must become conversant with the contents of at least the two summary volumes of the *USSBS*, the one on Europe and the other on the Pacific—if for no other reason than that they seem to be quoted and misquoted as frequently as the Holy Bible. If you are one of those aspirants, I fear that you must add *Revolution in Warfare? Air Power in the Persian Gulf* to that task, for it is practically certain to also become one of the classics. It will be widely read and cited not only among your colleagues but also among your counterparts in the other services and the staffers and decision makers in Washington. This is all the more true because the Naval Institute has seen fit to publish the work, which is but a little modified version of the original. The institute no doubt has a point in its assertion that the official version is not widely available enough to be delivered to a larger audience. But the task of adding this to your impera-

MAJ MASON CARPENTER

Thomas Keaney and Eliot Cohen argue that the US advantage in its enhancement and support functions may be even greater than in direct combat roles. A sample is the KC-135, seen here refueling an F-111 in the Gulf War.

tive-to-read-soon list will not be as onerous as you might think. It is exceedingly well written, and the editing is near perfect—a pleasure to read, in fact.

Revolution in Warfare? Air Power in the Persian Gulf claims not to be a definitive history of the air war. Still, in retaining the organization of the original, it does give a rather good overview of the experience. It starts with a summary of events and then proceeds to a set of topical chapters: planning, the effects of the execution of the plan, the achievements and disappointments of intelligence, the degree to which the Air Force ideal of centralized control—the joint force air component commander (JFACC) concept—was implemented and succeeded, and then a series of chapters on the nuts and bolts of executing an air war in a faraway desert environment.

Cohen and Keaney give full recognition to the notion that the Gulf War was unique, that the environment was well-nigh perfect for the application of airpower, and that the enemy could hardly have played into the hands of the air assault more than he did. But for all of that, recognizing that sea power and land power were also important, their thrust is that airpower came as close as it ever has to being *the* decisive factor in a war. That is not to say that either the plan or its application was perfect.

Certainly, the way that the campaign was planned little resembled the prewar visions of the ways in which that should be done. Checkmate (an Air Staff agency) got into the game more or less fortuitously, and the plan it conceived and brought to the theater was focused on strategic air attack. That was deemed insufficient by the theater authorities and excessively offensive and "strategic" in its outlook. So, the Checkmate leader was invited to leave the theater, his assistants were drafted onto Gen Charles Horner's inner planning group, and Brig Gen Buster Glosson was brought in to direct them. The original plan was greatly

expanded to include more work against the Iraqi fielded forces, though the attacks on downtown Iraq were retained. In my mind, it was a wonderful demonstration of one of the Air Force's (and America's) greatest strengths—and weaknesses. The plan never survives the first encounter with the adversary, the authors say, and one needs pragmatism to adapt more quickly and effectively than the enemy does—which is what this was.

Revolution in Warfare explores the outcome of the air plan in detail. Its greatest success seems to have been the degradation of the enemy's command and control system and the incapacitation of his integrated air defense organization. Among its disappointments, they say, was the outcome of the anti-Scud campaign and the limited effects of its assault on the Iraqi weapons of mass destruction (WMD) infrastructure (chemical/biological/nuclear weapons facilities). In the technical and tactical arenas, among the greatest satisfactions were the superiority of the coalition's air-to-air technology and force structure as well as the accompanying lethal and nonlethal suppression of enemy air defenses (SEAD) capabilities. Among the least satisfying were the limitations of the arrangements for bomb damage assessments (BDA) and intelligence—even though the notion is cited that in the overall sense, the intelligence advantage over the enemy was greater than it ever had been before. The problems here were not so much in the collection function, nor even so much in the interpretation area, but in the dissemination of the product to the people who needed it soon enough for it to be useful. At the end of the day, though, that intelligence had, through formal or informal channels, proved adequate to achieving a substantial air victory.

For all our obvious materiel superiority, things were not altogether tranquil in the "tail" part of the deployment and application of airpower. As Keaney and Cohen well demonstrate, Western pragmatism was given yet another true test. Though the distribution system worked like clockwork in comparison, the supply function appeared to be a magnificent "goat rope." Having flown in the tactical airlift system in Vietnam, I felt quite at home with their description. But one would think that in the 30 years since then, we would have perfected our computer systems for keeping track of things. Far from it. Apparently the giant logistics system dumped a profusion of goods into the yards of the Saudi ports in a way that would make either Tan Son Nhut or Da Nang seem like a model of efficiency. The software of the distribution system was not compatible with that of the supply system, and the result was that a large chunk of that profusion was lost in the storage yards—causing stuff to be reordered and further confusing the situation.

Keaney and Cohen correctly point out that the US demonstrated a substantial lead over the rest of the world (including its allies to varying degrees) in the core combat functions of airpower—air superiority, strategic air attack, interdiction, and close air support. But they add that the advantage was significantly larger in the specialized areas. Among the latter are the airborne warning and control system (AWACS) and the joint surveillance target attack radar system (JSTARS) for command and control, tactical and strategic airlift for intratheater and intertheater mobility, and SEAD units for force security and especially for space support in the various nonlethal functions now a part of that capability. Cohen and Keaney further argue that the lead enjoyed in all these areas is very substantial and that it is likely to persist for at least a decade and perhaps longer. This makes me wonder if some of our Air Force folks out at Colorado Springs who seem so eager to weaponize space might ponder this in the context of the history of Adm John A. ("Jacky") Fisher of the Royal Navy.

Fisher was the one who killed Pax Britannica and the Victorian Age, not to mention bringing about the carnage in the trenches of World War I—or so would argue some of the reductionist historians. The British had enjoyed a huge naval lead over all possible rivals ever since Lord Horatio Nelson had dispensed with Napoléon's fleet at Trafalgar. It was a wonderful century of

A 10-Book Sampler on Strategic Air-Attack Theory*

Works for USAF Professional Development

Two for the Macroview

Bernard Brodie, *Strategy in the Missile Age*. Brodie was a pioneer, perhaps the dean, of the postwar strategic theorists. The first part of the book provides an excellent summary review of the World War II background, and the rest introduces one to the world of deterrence theory.

Peter Paret, ed., *Makers of Modern Strategy: From Machiavelli to the Nuclear Age*. The last four chapters yield a good summary.

Eight for More Detailed Knowledge

Thomas C. Schelling, *Arms and Influence.* This is one of the classics of postwar nuclear theory, perhaps the most influential. It founds one theory on the modern utility and limitations of military force as an instrument for the achievement of national political objectives.

Robert Jervis, *The Meaning of Nuclear Revolution.* This can well serve as a basic text on the subject.

Henry Kissinger, *Nuclear Weapons and Foreign Policy*. Both the book and its author have had an enormous impact on US strategy making.

Alexander George and William E. Simons, eds., *Limits of Coercive Diplomacy: Laos, Cuba, Vietnam.* This work is becoming a classic in examining another dimension of the problems Schelling grappled with using a case study method.

Irving L. Janis, *Of Strategic Air War and Emotional Stress: Psychological Studies of Bombing and Civilian Defense*. One of the enduring problems in bombing has been the difficulty in transforming physical damage into adversary behavior changes—which makes the whole thing a psychological as well as a technical exercise, and which is a major factor in inducing the uncertainties Clausewitz warned us about.

Steve Hosmer, *The Psychological Effects of US Air Operations in Four Wars, 1941–1991.* This is the latest on the subject from RAND.

Fred Charles Ikle, *Every War Must End*. This work, written by a prominent scholar and practitioner, is in part a plea to adhere to the Clauswitzean notion that war must have a political end in view if it is to be a rational thing and a proposal on how nations might go about thinking conflict through to that end prior to undertaking dangerous enterprises.

(continued)

*This sampler provides a baseline for the generalist professional officer; it is not for the specialist in nuclear or airpower theory and doctrine—such a bibliography would require hundreds of pages. I acknowledge the expert advice I received from my colleagues Col Phillip Meilinger and Profs Dennis Drew and Karl Mueller—and thank them for it.

A 10-Book Sampler on Strategic Air-Attack Theory

(continued)

John A. Warden III, *The Air Campaign: Planning for Combat.* This work is so widely cussed and discussed in the profession that you will need to be familiar with it.

One for Good Measure

Thomas A. Keaney and Eliot A. Cohen, *Revolution in Warfare? Air Power in the Persian Gulf.* This is a slightly modified version of the summary volume of the *Gulf War Air Power Survey* and is sure to become a classic that will be widely quoted and misquoted.

security, peace, growing prosperity, and increased democracy—all emerging from the fact that the English had an enormous superiority in ships of the line, the very core of sea power. In the first decade of the new century, no one else had a prayer of overtaking the British numerical lead—until Admiral Fisher threw it all away. He got behind the dreadnought program, which was such a technological leap that it made all other capital ships obsolete in one stroke. But the downside was that the British lost much more than did the others. Hundreds of their capital ships and cruisers were instantly reduced to worthlessness while the other states lost the value of but dozens. Now the British lead was only one ship to none for the Germans (and the Americans).[2] All of which, reductionist authors say, led to a naval race which in turn led to World War I and the end of the long peace.

The point for the Air Force professional to ponder might be, What if we create a space dreadnought—one that would immediately make obsolete all of our many advantages in air and space power as suggested by Cohen and Keany? Would that reduce our lead to one versus zero? Would that so threaten the rest of the world's security as to stimulate a coalition against us as the perceived hegemon? Is there a case for leaving well enough alone?

Moving on from that diversion, another major point made by *Revolution in Warfare? Airpower in the Persian Gulf* is that centralized control of airpower works. The long-held dream of Air Service/Air Corps/Army Air Forces/USAF leaders has finally been realized in the JFACC system. The authors are wise enough to qualify the idea some, but they are enthusiastic for the notion. There are many doubters—and not all of them are in green or navy blue uniforms. I have heard a knowledgeable Air Force veteran say, in the presence of General Glosson himself, that the JFACC system has just papered over the problem—and our authors recognized that with the abundance of airpower at hand in the Gulf War, many of the hard decisions that the JFACC and the joint forces commander (JFC) would have made in other circumstances were not required. Doctrine does not matter much when you have wall-to-wall airpower.

As indicated above, there are few who could speak to the subject with more authority than Dr Cohen and Colonel Keaney. Further, *Revolution in Warfare? Airpower in the Persian Gulf* is well organized, elegantly written, and expertly edited. It is not only a credit to its authors, but also to the Naval Institute in its decision to publish it. If you are an Air Force professional, or especially professional in one of the other services, and you

Offensive counterair in the Gulf War proved devastating to the Iraqis. MAJ MASON CARPENTER

have time for only one book this year (Perish the thought!), then make it this one.

Well, so much for five new books on our topic. Whether you contemplate a mentorship program in your squadron, a great books study group, or merely your own personal professional reading program, you could well use a strategic air attack theory and doctrine as a skeleton for your enterprise. You might want to use the first two and the last on the "10-Book Sampler" (above) as openers. Only one of the books reviewed in this article is included there, but you might also want to include Terriff's work.

If you do start such an enterprise, the following questions might help you plan your next year's reading. Is formal warfare between states as a method of settling disputes any longer practical? If so, can airpower ever be the primary instrument of causing an adversary to modify his behavior to suit our objectives? Is there the possibility of an air-only campaign ever existing or must all campaigns and wars be joint? Has strategic air attack ever been *the* decisive factor, or even a decisive factor? Is nuclear warfare a possibility? Is the study of nuclear strategy and arms control worthwhile? Has there been a recent military technical revolution? Is a revolution in military affairs under way or in the offing? Is America obsessed with technology? Do service officers and civil servants always have a hidden agenda? To work toward answers, why not read one of the sampler books or a substitute each month[3] for the next year?

Notes

1. Robert H. Ferrell, ed., *The Eisenhower Diaries* (New York: W. W. Norton and Co., Inc., 1981), 6.
2. Martin van Creveld, *Technology and War: From 2000 B.C. to the Present* (New York: Free Press, 1989), 206; E. B. Potter, ed., *Sea Power: A Naval History*, 2d ed. (Annapolis, Md.: Naval Institute Press, 1981), 195; Robert L. O'Connell, *Of Arms and Men: A History of War, Weapons, and Aggression* (New York: Oxford University Press, 1989), 226.
3. Except January, which is for bowl games.

Among professional soldiers, anti-intellectualism can also express itself in an uncritical veneration of the military treatises of the past which, with almost metaphysical reverence, are taken as permanent contributions to military doctrine.

—Morris Janowitz, 1960

Contributor

Dr David R. Mets (BS, USNA; MA, Columbia University; PhD, University of Denver) is a professor at the School of Advanced Airpower Studies, Maxwell AFB, Alabama, and was once the editor of *Air University Review*. He spent a 30-year career as a Navy sailor and as an Air Force pilot and navigator. He flew more than 900 C-130B sorties in Vietnam, and his last flying tour was as commander of an overseas AC-130 squadron. He had teaching tours at both the US Military Academy and the US Air Force Academy. Dr Mets has published three books.

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