

DIFFERENT SHADES OF BLUE: INTERWAR AIR POWER DOCTRINE DEVELOPMENT

PART 1

AIR POWER, DOCTRINE AND THE ANGLO-AMERICAN APPROACH

By Major William March



“National defense [sic] can be assured only by an Independent Air Force of adequate power.”

Giulio Douhet¹

Introduction

Air power was born over the trenches in World War I, went through its adolescence during the relative peace of the interwar period and reached a level of maturity in European skies during World War II. It is arguable that most students of air power theory would accept this statement at face value. Unfortunately, the statement is extremely Western-centric and reflects the domination, at least in air power literature, of the United States (US) and, to a lesser extent, Great Britain. Anglo-American air power would centre on three basic facts: strategic bombing was a war-winning, decisive strategy; the bomber would always get through; and only an independent air force commanded by airmen could implement the strategy. Even Germany, the Anglo-American European foe, is accorded an honoured place in air power discussions not only because the German approach to air power was extremely similar to that followed by the US and Britain, but because the *Luftwaffe's* lack of appreciation of the strategic bombing role resulted in its defeat. Therefore, Germany is the perfect “negative” example of how not to develop air power doctrine. However, the US and Great Britain did face another major challenge with respect to the successful prosecution of an air war in World War II—Japan. Japan’s approach to air power during the interwar period was radically different from that pursued by the other three nations in that it never advocated a strategic bombing doctrine, was totally integrated with a parent service and was not commanded by an airman. That Japan chose this approach to air power should not be seen as “wrong,” but merely reflective of a different developmental process and as worthy of study as the Anglo-American theories of air power.

My analysis and discussion is limited to the primary representatives and developers of air

power doctrine in each of the four nations that will be examined. In the US this position was occupied by the Army Air Corps, in Britain by the Royal Air Force (RAF), in Germany the *Luftwaffe* and in Japan the Imperial Japanese Naval Air Force. These four organizations were pivotal in the development of their respective national approaches to air power during the interwar period. In this first of two parts, this paper will briefly examine the birth of air power, discuss the nature of doctrine and examine the growth of Anglo-American air power doctrine during the interwar period. The second part will address the air power doctrine development of Britain and the US’s primary adversaries during World War II and will offer some conclusions on similarities and differences between the combatants.

Air Power

Prior to 1914, aviation was in its infancy. Barely eleven years old when war engulfed Europe, heavier-than-air aircraft were slow, fragile and relatively unarmed. Although the first tentative steps had been taken to explore the offensive potential of aircraft, aviation commenced the war as essentially the “eyes” of long-established land and maritime forces. It was the considered opinion of the military experts of the day that this was the most efficient and effective use of this new technology. For the most part, the potential of this new technology to change the face of war and effect national destinies was left to the imagination of fiction writers.² Four years later, much of the fiction had become reality and aviation had become a tactical necessity on the battlefield, as well as a strategic concern on the home front. Nearly every major combatant in World War I, whether victor or vanquished, had an air service as part of their fielded military forces on 11 November 1918. However, despite the emergence of aviation as a major factor in modern war, the concept of “air power” as an element of a nation’s military repertoire, as important as land or maritime power, had yet to be developed. Empirical proof from the war aside, nations and militaries would struggle to find a “home” for air power throughout the interwar period.

The various bombing campaigns of World War I planted the seeds for the development of air power doctrine during the interwar period, at least in the West. Beginning in 1916, the Germans began launching attacks against London, at first with airships and then with large bombardment aircraft. Reprisal raids by Britain were the stated purpose of the Independent Force of bombers under the command of a future leader of the RAF, Lord Trenchard. As well, the Italians and Austrians were enthusiastically bombing each other in their theatre of war. All of these campaigns had a profound effect on theorists who either had direct experience in bombing operations, such as Trenchard and Giulio Douhet, or experienced them second hand through discussion and observation, such as William Mitchell.

Douhet wrote that air power was an offensive force that would dominate the modern battlefield. In order to triumph, a nation must be prepared to strike quickly at the beginning of a conflict and launch “massive attacks against the enemy centres of population, government and industry—hit first and hit hard to shatter enemy civilian morale, leaving the enemy government no option but to sue for peace.” He also argued that “an independent air force armed with long-range bombardment aircraft, maintained in a constant state of readiness, [was] the primary requirement” to accomplish this mission.³ With only slight variations, this would become the focus of Anglo-American air power doctrine between the wars.

Despite its rapid development during World War I, military aviation’s place within the political and military apparatus of nations was far from certain during the interwar period. Without doubt military aviation was here to stay, but what shape this new element of warfare would take had yet to be determined. Although the aircraft had proven itself to be a formidable addition to the combat power of a nation, the life and death struggle of the war meant that air power had been guided by the requirements of day-to-day survival rather than a coherent approach to its long-term utility to national interests. Battle-proven, air power now had to establish itself in the somewhat harsher

arena of peacetime politics and institutional infighting. In other words, air power needed its own doctrine upon which to “hang its hat.”

Doctrine

What is doctrine and why is it important? Chris Demchak, in *Military Organizations, Complex Machines, and Modernization in the U.S. Armed Services*, defined it as “the military professional’s best guess as to how organizations should respond to the unknowns of wartime in order to be successful...”⁴ This simple definition highlights three general perceptions about doctrine: it is the exclusive purview of the military, it is a “guess” and that it is only applicable in wartime. Such a definition ignores the impact of non-military contributors, such as politicians, academics or business people, to a nation’s air power doctrine. These contributions were especially important during a period when air power doctrine was in a permanent state of flux. At the same time, although there may be an element of “guess work” involved in doctrinal development, all factors being equal, it is normally mitigated by experience and practice. It could be argued that, given its rather short history, interwar air power doctrine relied rather heavily on “guess work”; however, this varied from nation to nation and was more likely to occur when other developmental factors dominated the process. Without disputing its wartime utility, doctrine should permit the employment of all the elements of national power, including military aviation, to further the state’s goals be it during peace or war.

Barry Posen’s definition of doctrine is closer to the mark. Posen wrote that military doctrine “is a response to both national and international influences. It represents the state’s response to the constraints and incentives of the external world, yet it encompasses means that are in the custody of military organizations.”⁵ In other words, doctrine is “bigger” than just a military organization and is influenced by a number of factors external to that organization. As well, Posen argues that military doctrine has a direct bearing on the well-being of the state in that it has an impact on international political life and the security of the state.⁶ Interwar air power

advocates would have found little in Posen's statement to disagree with.

Posen advances two theories to serve as the basis for analysing French, British and German doctrinal development between the wars: organizational theory and balance of power theory. Organizational theory tends to focus on the organization's purpose, people and environment as the principle causal factors that influence its approach to basic doctrinal elements such as adopting an offensive, defensive or deterrent posture; political-military integration; and innovation.⁷ On the whole, Posen concludes that military organizations favour offensive doctrine. Offensive doctrine provides a focused purpose that reduces uncertainty by maintaining the initiative in a conflict and encouraging state support during peacetime. At the same time, this type of doctrine may lead to increased size, wealth and autonomy as the organization is perceived to be of increasing importance to the state.⁸

Unfortunately, a military organization's increasing importance and autonomy does not always foreshadow a symbiotic relationship with a nation's goals and means. Noting that militaries have a tendency to minimize "civilian interference" as much as possible, Posen deduces that militaries do not place a priority on reconciling their means with state policy, tend to restrict the flow of information to their civilian masters and, in the absence of strong civilian oversight, will reach a negotiated settlement amongst the different service elements that will, for all practical purposes, permit them to achieve their doctrinal aims.⁹

Finally, with respect to innovation, Posen states that only rarely will militaries initiate innovative military doctrine internally.¹⁰ Although changes to military doctrine can reasonably be expected to stem from technological changes or stimulation provided from outside sources, this is often not the case because innovation brings with it operational and institutional uncertainty. Military organizations may attempt to minimize this uncertainty in a number of ways including making new technology "fit" existing doctrine;

ignoring potential lessons to be learned from other militaries or organizations; and corrupting or suppressing evidence that contradicts their preferred doctrine.¹¹

The second theory that Posen advances to explain doctrinal development is the balance of power theory. This theory predicts a "greater heterogeneity in military doctrine" based upon "reasonable appraisals by each state of its political, technological, economic and geographical problems and possibilities in the international system."¹² Accordingly, offensive doctrines will most likely be adopted by states that wish to expand, fear high collateral damage, face multiple opponents, anticipate an erosion of relative power, are geographically dominated by potential opponents or have global security requirements. Defensive doctrines are preferred by nations that have limited resources, opt for security through a coalition, seek to maintain the status quo or feel that they are in no immediate danger. Finally, deterrent doctrines may be employed by states with limited military means as a sort of "default" position. Regardless of the type of defence posture selected, the balance of power theory presupposes a high degree of rational civilian intervention in military doctrinal development. In turn, such a high degree of civil-military integration would lead to a balanced doctrine more capable of adopting innovative approaches to changing imperatives.¹³

Although valid in many areas, Posen's theories do indicate a strong bias against the organizational imperatives of militaries and seem to over-emphasize the "even-handedness" of civilian politicians. Elizabeth Kier in her examination of French and British military doctrine between the wars agrees with Posen's viewpoint that often "military organizations pursue their parochial interests." She goes on to note that military doctrine is also about the allocation of power *within* [emphasis in original] society" which makes it very much a domestic political issue.¹⁴ Domestic politics have a completely different set of paradigms as compared to those that govern international relations. Kier notes that Posen's:

argument about the role of civilians and the international system exaggerates the

power of systemic imperatives and misses what civilian policy makers often care most about. First, as many realists recognized, the structure of the international system is indeterminate of choices between offensive and defensive doctrines. Second, even during periods of international threat, civilians rarely intervene in doctrinal developments, and when they do, their decisions are often damaging to the state's strategic objectives. Third...civilian intervention is often a response to domestic political concerns, not to the distribution of power in the international system.¹⁵

In certain situations, perceived domestic political requirements may have had a greater effect on doctrinal development than either organizational or international security requirements.

Drew and Snow made the point that doctrine is not just the result of experience. They point out that:

Experience by itself has limited utility. As Frederick the Great pointed out, if experiences were all-important, he had several pack mules who had seen enough of war to be field marshals. The real key is the accurate analysis and interpretation of history (experience) – and therein lies the rub. Each individual looks at history through different lenses, lenses shaped by a variety of factors, lenses that interpret history in very different ways. The results are differing views among nations and among military services within nations about the

lessons of history and their applicability to the present and future.¹⁶

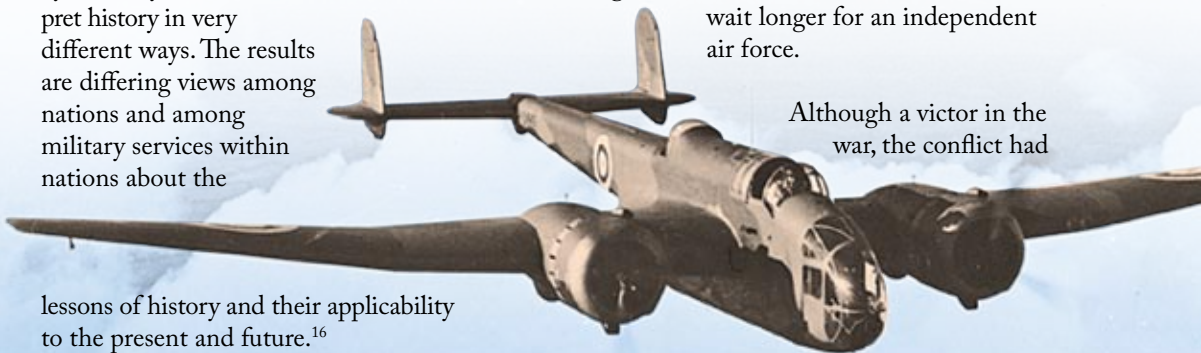
Each nation that was wrestling with the issue of air power during the interwar period approached it from a different perspective based upon its interpretation of not only history,

but of organizational, balance of power and domestic political concerns as well. Depending on which one of these areas dominated the developmental process, the national approach to air power doctrine could be similar (US and Great Britain), slightly different (Germany) or radical (Japan).

The British Approach

Of all the major combatants in World War I, Great Britain was the only one that came away from the war with an independent air force. However, it was an air force that was very much a creature of the circumstances and personalities that had created it. The RAF came into being on 1 April 1918 primarily in response to German attacks on London and the perceived inability of its predecessor (the Royal Flying Corps) to deal with them. In addition, the newly created third military service of the Empire was to strike back at Germany in kind. Therefore, from its very inception the RAF was assigned strategic bombardment as a founding role.¹⁷ There is no doubt that the creation of the RAF served the organizational desires of air officers for independence from the army and navy, while the strategic bombardment role gave them a mission that only they could carry out. However, without the domestic political requirement to demonstrate something was being done to defend the home front, while at the same time exacting revenge against the “Hun,” it is arguable that Britain would have had to wait longer for an independent air force.

Although a victor in the war, the conflict had



A Handley-Page Hampden Bomber, manned by Royal Canadian Air Force personnel, speeds across the English countryside for a raid on German territory. Credit: National Defence Photo

left Britain much weakened economically and retrenchment became the order of the day. In August 1919, the British cabinet agreed

upon broad guidelines that would dominate defence planning and expenditures until the early 1930s. The services were told to plan for no major war for the next five to ten years and to focus their efforts on policing the Empire. To accomplish these policing tasks, manpower would approach pre-1914 levels. Finally, where possible, new weapons and technology would replace manpower.¹⁸ To a certain extent these guidelines were based on the perceived state of international affairs. However, it would be equally true to say that they reflected a true appreciation of economic reality and a profound distaste for the type of conflict that they had just been through. Stephen Cimbala labeled it “belligerent non-belligerence” derived from a firm belief that “World War I had been ‘a war to end all wars’ and it was against accepted canon to argue otherwise.”¹⁹

Lord Trenchard, as Chief of the Air Staff, proved adept at navigating the political and fiscal waters of the 1920s ensuring not only the survival of the RAF as an independent service, but gaining acceptance of strategic bombardment as the focal point of British air power doctrine as well. Commencing with an expedition to Somaliland in 1919, he gave successive governments what they craved—a cheap method of “policing” recalcitrant colonial tribes via aerial attack with minimal ground support.²⁰ A role only the RAF could perform, aerial policing, as this policy came to be known, provided the necessary political support to permit Trenchard to establish permanent RAF bases and institutions including the RAF Staff College. Opened in 1922, the RAF Staff College would serve to cultivate an air force spirit and culture very much focused on the efficacy of strategic bombing.²¹

According to Tami Biddle, the RAF Staff College served “more as a disseminating station for the accepted organization viewpoint than it did a centre for critical thinking.”²² Even after his retirement in 1930, the accepted organizational viewpoint with respect to strategic bombing was Trenchard’s. War was a psychological contest where the morale of a hostile nation could be shattered by targeting enemy workers’ homes and workplaces. The attack

would be conducted incessantly, without regard to losses, forcing the enemy on the defensive until they finally surrendered. Anything that detracted from the aerial offensive was relegated to secondary importance. In general terms, this was the doctrine advocated by the *Royal Air Force War Manual* published in 1928.²³

Successive British governments were of two minds when it came to strategic bombing. There was a desire to “outlaw” strategic bombing as an acceptable method of war. This grew from concerns about the moral and legal issues surrounding the deliberate targeting of non-combatants and the realization that foreign air power threatened British cities, as evidenced by the 1925 French “scare.” Britain pressed for “aerial disarmament” at the Geneva disarmament talks that took place from 1932 to 1934. Unfortunately, this proposal, as well as the entire talks, collapsed with no resolution.²⁴ Some British politicians actively supported the RAF’s offensive doctrine because it allowed them to avoid that which they feared the most—an expensive continental commitment similar to that of 1914.²⁵ As late as 1936, the government’s White Paper on defence placed committing forces to the continent behind defence of the British Isles and garrisoning the Empire in order of priority. That same year the Chancellor of the Exchequer, Neville Chamberlain, confided to his diary that “I cannot believe that the next war, if it ever comes, will be like the last one, and I believe our resources will be more profitably employed in the air, and on the sea, than in building up great armies.”²⁶ One year later, Chamberlain was the Prime Minister and his outlook on defence had not changed as he remained convinced that “the maintenance of Britain’s economic stability represented an essential element in the maintenance of her defensive strength.”²⁷

The desire to avoid a major continental commitment did not mean that British politicians failed to appreciate the potential threat that lay in a resurgent Germany and a militaristic Japan. Commencing in 1935, the government did commit modest funds for rearmament, but these funds were intended to

increase military strength as a deterrent rather than as concrete preparation for war. Therefore, Britain sought numerical parity with Germany, especially with respect to bombers, in the belief that such action would signal Britain's determination to defend itself while not appearing threatening.²⁸ For the RAF, this meant additional funds for their strategic bombing forces.²⁹

By the mid-1930s, the RAF's strategic deterrent lay with Bomber Command. However, it was a hollow force. RAF doctrine called for massive attacks on enemy heartland, but it lacked the aircraft, bomb carrying capacity and ability to locate even the largest cities. Furthermore, the firm belief that "the bomber would always get through" allowed the RAF to conveniently ignore the rapid pace of technological changes occurring through the 1930s.³⁰ Trenchardian doctrine was large on rhetoric but short on practical details on how to mount a sustained aerial offensive. Nor was the RAF particularly concerned throughout the 1920s and 1930s because their doctrine had served organizational requirements very effectively. Tami Biddle summed up the apparent complacency as follows:

Of the dominant RAF view in the interwar years, Sir John Slessor later wrote, "Our belief in the bomber, in fact, was intuitive—a matter of faith." This faith came partly from prevailing assumptions about societal and economic vulnerability, partly from the need to preserve a lever—in the form of the strategic air offensive—in interservice wars, and partly from cultural norms inside the service. Though formally professionalized, the military services in interwar Britain continued to be pervaded by a spirit of traditional amateurism.³¹

The cost of trying to maintain parity with Germany had grown so great that by 1938 the British government realized that it could not continue with this policy. It, therefore, radically reoriented its air power focus to one stressing defence rather than offense; henceforth Fighter

Command would get significantly more resources which, as it turned out, was fortunate for Great Britain.³²

When war began in September 1940, the RAF's ability to mount the type of bomber attacks that they had advocated for so long was restricted due to both technology and policy as the government did not want to encourage the Germans to respond in kind. When the RAF finally began to mount their first "raids" they quickly found out that their doctrine of daylight attacks by unescorted bombers was unworkable. Losses mounted to the point where the RAF was forced to switch to night bombing which meant that survivability went up, but accuracy went down.³³

Royal Air Force doctrine during the interwar period was dominated by organizational concerns. Strategic bombing to shatter an enemy's will, although initially a minor part of Britain's air effort during World War I became, thanks to Trenchard and his disciples, one of the two central tenets of British air power doctrine. The second tenet was that an independent air force was required to carry out the first; however the first was needed to preserve the second. Given British domestic political and international security concerns, the best way to preserve the RAF was to solve both problems cheaply; strategic bombing doctrine fit the bill nicely. After World War I, bombing not only provided an apparently efficient and cost-effective method of policing the Empire, it also seemed to offer the government a means to avoid a manpower-heavy commitment to Continental Europe, an anathema to British voters. Despite efforts to have aerial bombardment declared an illegal form of warfare, Great Britain came to rely upon the RAF's Bomber Command as the only effective deterrent against a resurgent Germany. To this end they were influenced by the "air propaganda" coming from the Air Ministry that offered a cost-effective solution. From an organizational viewpoint, reliance on Bomber Command not only maintained the primacy of strategic bombing doctrine, it permitted the RAF to obtain a privileged position during inter-service discussions.³⁴ Regardless of

the fact that the RAF had done little to make their strategic bombing doctrine any more than a self-serving theory, the organizational goals of the air force had been met.

The American Approach

World War I ended before the American air services were fully developed. For the most part, US participation in the air war was limited to direct support of American ground forces using foreign manufactured aircraft. Although some senior air officers gained a certain amount of experience commanding large formations of aircraft, they never had the opportunity to fully explore elements of air power such as strategic bombardment.³⁵ When hostilities ended, the US Army Air Service remained a small, subordinate part of the overall US Army and so it would remain for approximately the next 15 years.

Eliot Cohen noted that throughout “the 1920s and 1930s, most Americans viewed World War I as a grievous exception to a long-standing policy of non-involvement in European affairs. To most the war represented a terrible mistake. A happy revision to an ante bellum strategic outlook seemed the logical outcome.”³⁶ Unlike Great Britain, two oceans and harmless neighbours to the north and south secured the heartland of the United States. There was simply no comparable threat of invasion or aerial attack to stimulate defence planning. However, like Great Britain the US had vital interests in the Far-East. United States’ interests in the Philippines and Pacific island possessions, such as Wake and Guam, needed to be garrisoned and protected. Although the army (including land-based aircraft) would provide the garrisons, the responsibility for their defence rested with the United States Navy (USN). To ensure that the strategic environment remained as benign as possible, Congress controlled military expenditures and passed “neutrality legislation” to make sure the US stayed out of foreign wars.³⁷

Air power advocates returning from the battlefields of France were “behind the eight ball.” Still subordinate to the army, the Air Service (or Air Corps as it would soon be renamed) had no rationale for the establishment

of an independent service. However, in the RAF they had an example for inspiration, and in Brigadier-General William Mitchell they found a voice. Influenced by both his war-time experience and conversations with Lord Trenchard, Mitchell came to firmly believe that aviation had revolutionized warfare. In effect, air power rendered armies and navies obsolete by being able to fly over them to attack the enemy nation. Like Trenchard, Mitchell believed that strategic bombardment by large numbers of bombers offered an efficient, effective and decisive way to wage war. He argued that the large sums of money now being spent on the army, and especially on the navy, should instead be invested in an independent air force, commanded by airmen who knew better than anyone else how to employ this new technology.³⁸

It is difficult to determine Mitchell’s overall effect on doctrine development within the Air Corps. Through a series of well-publicized “stunts,” published works and speaking engagements, there is no doubt he not only managed to irritate the military hierarchy of both the army and navy, he kept air power in the public eye. Court-martialled in 1925 for insubordination, Mitchell gradually faded from public view. Although his call for an independent air force with a strategic bombing mission resonated with the young airmen of the day, I.B. Holley Jr. offers a more balanced assessment:

Although airpower [sic] advocates have found it useful to employ the hero-martyr Mitchell as a symbol, a close study of his writings will quickly reveal the superficiality of this thinking and its lack of solid doctrinal content. It might even be argued that his intemperate style of advocacy did more harm than good to the cause of airpower. . . . Billy Mitchell was a romantic in an era that called for disciplined analysis in an increasingly high-tech field.³⁹

Peter Faber in his paper on the Air Corps Tactical School describes a four-part strategy developed ad hoc by early air leaders and thinkers in order to ensure that American air power

developed to its full potential. In general, they sought to “(1) redefine America as an airpower [sic] rather than a maritime nation; (2) demonstrate and publicize the versatility of airpower [sic] in peacetime roles; (3) create both a corporate Air Corps identity through political maneuvering and an independent air force through legislation; and (4)...develop a unique theory of air warfare – unescorted high-altitude precision daylight bombardment against the key nodes of an enemy’s industrial infrastructure.”⁴⁰ In other words, airmen were going to work towards the primacy of air power over the objections of the other military organizations and their political masters and without regard to the international policies of the state. This was definitely an example of the triumph of organizational imperatives.

Although efforts to demonstrate and publicize the peacetime utility of air power met with only limited success, the strategy scored some notable achievements in the other areas. For all practical purposes by the late 1930s, America did consider itself *both* an air power and a sea power. A major step in this goal had been reached in 1931 when the heads of the US Army and USN reached an agreement to determine the functional responsibilities of their respective services regarding coastal defence and seaborne operations. Land-based army aircraft were to be employed in defending the coasts both at home and abroad. Depending upon how the mission was defined, and the Air Corps defined it in their favour, coastal defence required long-range aircraft capable of precision attacks against enemy shipping. These capabilities would be “coached” in defensive terms to meet the dictates of national policy, but the seeds were laid for the development of

technology such as the B-17 and the Norden bomb-sight.⁴¹

Throughout the 1920s and early 1930s, efforts to create an independent air force had resulted in incremental changes, but fallen short of achieving anything substantial. Then in 1934, the government sponsored Howell Commission decided that “the Air Service had now passed beyond its former position as a useful auxiliary and should in the future be considered an important means of exerting directly the will of the Commander-in-Chief.” Recognizing that the agreement between the army and navy described above had effectively given the Air Corps control over all land-based bombardment, pursuit (fighter), attack and observation aircraft, the Commission recommended the formation of a permanent General Headquarters (GHQ) Air Force to serve as “an independent striking unit.” Approved in 1935, GHQ Air Force would be as close to independence as the Air Corps would come prior to World War II.⁴²

Underpinning all of the organizational infighting and political maneuvering was the development of a distinct air power doctrine. Like their British counterparts, American airmen were drawn to what they saw as the potential of air power through strategic bombing to bring a new, decisive element to warfare. However, they did not agree with the RAF’s focus on the morale effects of this type of bombing. Instead, they focused on the perceived “frailties and weaknesses in the interlocking structure of a modern industrial society.” Through careful analysis, they reasoned that critical nodes could be identified, the destruction of which would

B-17 Flying Fortress
Credit: United States Air Force website



critically impair the enemy's ability to wage war and lead to victory. Developed and refined by the so-called "Bomber Mafia" at the Air Corps Tactical School (ACTS) throughout the 1920s and 1930s, the "industrial fabric" theory of bombing dominated air doctrine within the United States during the interwar period.⁴³ The best way to strike these critical nodes would be via daylight precision bombing. The Air Corps pinned its hopes on the B-17, equipped with the Norden bombsight, as the aircraft that would enable it to field its envisioned strategic bombing capability.

Despite the Air Corps' obvious preference for an offensive strategy, the B-17 was given the nickname the "Flying Fortress" in order to underline its "defensive" orientation.⁴⁴ Then the Munich Crisis in September 1938 provided the impetus for a massive growth of American air power. In response to European events, President Roosevelt addressed Congress on 12 January 1939 calling for a three-fold increase in the size of the Air Corps. This would be the first in a number of increases that would see the Air Corps expand from 20 tactical air groups in the spring of 1939 to 84 by the fall of 1941.⁴⁵

Although Air Corps size and importance may have increased due to international security concerns, doctrine still remained firmly focused on the bomber. Furthermore, despite evidence provided by the RAF to the contrary, the Americans remained convinced that daylight precision bombing was the most efficient way to prosecute the war. This doctrine formed the basis for Air War Plans Division – 1 (AWPD-1), developed by four men heavily indoctrinated by the ACTS. AWPD-1 emphasized selective daytime attacks on key targets by unescorted bombers.⁴⁶ So intent was senior Air Corps leadership on maintaining the organizational primacy that "bombers would always get through" that they ignored in-house reports to the contrary, "rigged" so-called demonstrations and withheld technology that could have permitted the early fielding of escort fighters.⁴⁷ Thousands of American airmen would pay for this myopic adherence to Air Corps doctrine with their lives.

America spent most of the interwar period avoiding international entanglements. Until the late 1930s and early 1940s, US international security concerns were such that they had a minimal influence on the development of air doctrine. Although the technological promise of aviation inspired and interested the American public during this period, the attention paid to the military services including the Air Corps can be described as one of benign neglect. Therefore, organizational requirements were the driving force behind US air power doctrine. In this case, the purpose of the doctrine was to create an independent air force whose primary focus would be strategic bombing. They succeeded in that the US entered World War II with an air force independent in all but name and with an air power doctrine that called for daylight precision attacks on key enemy targets. It would be left to the crucible of war to determine if the doctrine was sound or not.

Conclusion

Both Great Britain and the United States developed similar air power doctrine based on organizational requirements modified, when required, to address international security and domestic political concerns. The RAF and the Air Corps adopted an offensive strategy based on aerial bombardment as the primary mission of military aviation. They differed only on the issue of targeting with the Americans seeking to destroy key nodes while the British sought to destroy the will of the enemy by striking directly at the civilian work force. Whereas the British could openly refer to such a strategy supported by both domestic policy seeking to avoid a repeat of World War I and the need to build a credible deterrent, until the beginning of World War II, the Air Corps had to insist that such a capability was defensive in nature.

A strategy of aerial bombardment would be administered most efficiently by an independent air force commanded by airmen who best understood this new way of war. For the RAF, this meant keeping the air force in existence despite economic recession and challenges from the other services. To this end the RAF was willing to do whatever was required to

prove itself useful to the nation until such time as air power came to dominate defence considerations. The US Air Corps spent the interwar period striving for independence and, for all practical purposes, achieved it by the start of World War II.

The final major tenet of their doctrine was that the bomber would always be able to reach the target and it came from the experience gained during World War I, as well as during

exercises conducted throughout the 1920s. As defensive technology (primarily fighter and early warning) improved, the possibility that the bomber would always get through came to be called into question. However, if the survivability and effectiveness of bombers was being challenged so too could the veracity of air power doctrine—including the need for independent air forces. Thus it was in the best interest of air power advocates to downplay a nation's ability to defend against aerial bombardment. ■

Major William March graduated from the Royal Military College in 1982, he underwent basic navigation training in Winnipeg, and then proceeded onto CP140 Auroras, serving on 407 Maritime Patrol and 404 Maritime Patrol and Training Squadrons. Posted to Royal Roads Military College in 1990 as a Squadron Commander, he was promoted the next year and assumed military training and administrative duties for the College. In 1993, he completed his Masters Degree at the University of Victoria and was selected to recreate the position of Air Force Historian at 1 Canadian Air Division Headquarters. After Staff College in 1998, he filled a series of staff appointments at National Defence Headquarters which culminated in working on unmanned air vehicles (UAVs) and intelligence, surveillance and reconnaissance (ISR) for the Air Force. Posted overseas in 2003, he worked as the principal Desk Officer for the North Atlantic Treaty Organization Response Force activities of the Land Component Command Headquarters, Heidelberg, Germany. Returning to Canada in 2006, he spent two years as the Concepts and Doctrine Development desk officer for UAVs and Space at the Canadian Forces Aerospace Warfare Centre in Trenton, Ontario. Although he is still involved with UAVs, his “day job” is that of the Academic Liaison Officer within the Strategic Aerospace Research, Assessment and Liaison Branch. To make the most of his spare time, in September 2006, he commenced studies towards a PhD in War Studies at the Royal Military College. Major March has a long-time interest in aerospace history in general and Canadian Air Force history in particular.

List of Abbreviations

| | | | |
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| ACTS | Air Corps Tactical School | RAF | Royal Air Force |
| AWPD-1 | Air War Plans Division – 1 | US | United States |
| GHQ | General Headquarters | USN | United States Navy |

Notes

1. Giulio Douhet, *Command of the Air*, trans. Dino Ferrari (New York: Coward-McCann, 1942; repr., Washington: GPO, 1983), 32.
2. Edward Warner, “Douhet, Mitchell, Seversky: Theories of Air Warfare,” chap. in *Makers of Modern Strategy* ed. by Edward Mead Earle (Princeton: Princeton University Press, 1941), 486. Authors such as H.G. Wells, predicted that air power would have a devastating effect in future wars rendering traditional means of defence, such as the English channel, irrelevant.
3. David MacIsaac, “Voices from the Central Blue: The Air Power Theorists,” in *Makers of Modern Strategy: From Machiavelli to the Nuclear Age* ed. Peter Paret (Princeton: Princeton University Press, 1986), 630.
4. Chris. C. Demchak, *Military Organizations, Complex Machines, and Modernization in the U.S. Armed Services* (Ithaca: Cornell University Press, 1991), 13.
5. Barry R. Posen, *The Sources of Military Doctrine: France, Britain, and Germany Between The Wars* (Ithaca: Cornell University Press, 1984), 38.
6. *Ibid.*, 15-16.

7. Ibid., 42. Posen provides a comprehensive explanation of the causal factors on pages 42-44.
8. Ibid., 47-49.
9. Ibid., 51-53.
10. Nor is Posen the only author to comment on this phenomenon. Dennis Drew and Don Snow, writing on the linkage between strategy and doctrine, also commented on "the most ubiquitous doctrinal problem is the tendency to let doctrine stagnate." Dennis Drew and Don Snow, *Making Strategy: An Introduction to National Security Processes and Problems* (Maxwell: Air University Press, 1988), 166.
11. Posen., 54-57.
12. Ibid., 59.
13. Ibid., 59-78.
14. Elizabeth Kier, *Imagining War: French and British Military Doctrine Between the Wars* (Princeton: Princeton University Press, 1997), 20.
15. Ibid., 11.
16. Drew and Snow, 164.
17. H.H. Ransom, "Lord Trenchard, Architect of Air Power" *Air University Quarterly Review* VIII, no. 3 (Summer 1956): 60-61. Spurred to a large degree by German raids on London in 1917 and 1918, British politicians examined the role of air power. The result was a committee headed by Lieutenant General Smuts, a South African who had actually fought against the British during the Boer War. One of his conclusions, oft quoted by air historians, is worth noting in its entirety. "Unlike artillery an air fleet can conduct extensive operations far from, and independent of, both Army and Navy. As far as can at present be foreseen, there is absolutely no limit to the scale of its future independent war use. And the day may not be far off when aerial operations with their devastation of enemy lands and destruction of industrial and populous centres on a vast scale may become the principal operations of war, to which the older forms of military and naval operations may become secondary and subordinate."
18. Tami Davis Biddle, *Rhetoric and Reality in Air Warfare: The Evolution of British and American Ideas About Strategic Bombing, 1914-1945* (Princeton: Princeton University Press, 2002), 82.
19. Stephen J. Cimbala, *The Politics of Warfare* (University Park, PA: Pennsylvania State University Press, 1997), 28.
20. Peter Meilinger, "Trenchard, Slessor, and Royal Air Force Doctrine before World War II," in *The Paths of Heaven: The Evolution of Airpower Theory*, ed. by Phillip S. Meilinger (Maxwell: Air University Press 1997), 49-50.
21. Allan English, "The RAF Staff College and the Evolution of British Strategic Bombing Policy, 1922-1929," *The Journal of Strategic Studies* 16, no. 3 (September 1993): 409.
22. Biddle, *Rhetoric and Reality in Air Warfare*, 92.
23. Peter Meilinger, *Airwar: Theory and Practice* (Portland: Frank Cass Publishers, 2003), 48-49.
24. Tami Davis Biddle, "British and American Approaches to Strategic Bombing: Their Origins and Implementation in the World War II Combined Bomber Offensive," in *Airpower: Theory and Practice*, ed. John Gooch (London: Frank Cass, 1995), 101.
25. Kier, 98. Kier claims that overall civilian and political support, led by the Chancellor of the Exchequer, Neville Chamberlain, led the successful campaign to designate strategic bombing as the linchpin of British strategy.
26. Ibid., 93.
27. Williamson Murray and Mark Grimsley, "Introduction: On Strategy," in *The Making of Strategy: Rulers, States, and War*, eds. Williamson Murray, MacGregor Knox and Alvin Bernstein (New York: Cambridge University Press, 1994), 402.
28. Malcom Smith, *British Air Strategy Between the Wars* (Oxford: Clarendon Press, 1984), 315.
29. Brian Bond and Williamson Murray, "The British Armed Forces, 1918-1939," in *Military Effectiveness, Volume II: The Interwar Period*, eds. Williamson Murray and Allan R. Millet (Boston: Allen & Urwin, 1988), 99-100.
30. Peter Meilinger, "Trenchard, Slessor, and Royal Air Force Doctrine before World War II," 57.
31. Biddle, *Rhetoric and Reality in Air Warfare*, 87-91.
32. H. Montgomery Hyde, *British Air Policy Between the Wars* (London: Heinemann, 1976), 502.
33. I.B. Holley Jr., *Technology and Military Doctrine: Essays on a Challenging Relationship* (Maxwell: Air University Press, 2004), 101.
34. Smith, 321.
35. For example, William Mitchell, a post-war air power advocate, commanded a force of 1500 aircraft during the American offensive at Saint-Mihiel in September 1918. Although there were some bombardment attacks launched against the German rear area, it could scarcely be called "strategic." Alfred F. Hurley, *Billy Mitchell: Crusader for Air Power* (Bloomington: Indiana University Press, 1975), 34-37.
36. Eliot A. Cohen, "The Strategy of Innocence? The United States, 1920-1945," in *The Making of Strategy: Rulers, States, and War*, eds. Williamson Murray, MacGregor Knox and Alvin Bernstein (New York: Cambridge University Press, 1994), 419.
37. Ibid., 436.
38. For Mitchell's complete story see Hurley, *Billy Mitchell, Crusader for Air Power*, or for a "shorter read" I recommend Mark A. Clodfelter, "Moulding Airpower Convictions: Development and Legacy of William Mitchell's Strategic Thought," in *The Paths of Heaven: The Evolution of Airpower Theory*, ed. Phillip S. Meilinger (Maxwell, Air University Press, 1997), 70-114.
39. Holley Jr., 46.
40. Peter R. Faber, "Interwar US Army Aviation and the Air Corps Tactical School: Incubators of American Airpower," in *The Paths of Heaven: The Evolution of Airpower Theory*, ed. Phillip S. Meilinger (Maxwell, Air University Press, 1997), 186.
41. Biddle, *Rhetoric and Reality in Air Warfare*, 144 and 161.
42. Faber, 210.
43. Howard Belote, "Warden and the Air Corps Tactical School," *Airpower Journal* 13 (Fall 1999): 39.
44. Russell Weigley, *The American Way of War* (New York: Macmillan, 1973), 241.
45. Eugene M. Emme, "Air Power and Warfare, 1903-1941: The American Dimension," eds. Alfred Hurley and Robert Ehrhart (Washington: Government Printing Office, 1978), 75.
46. Biddle, "British and American Approaches to Strategic Bombing," 117-118.
47. Holley Jr., 100-104.