

AU/ACSC/98-182/1998-04

AIR COMMAND AND STAFF COLLEGE

AIR UNIVERSITY

THE IMPACT OF THE AIR CORPS TACTICAL SCHOOL
ON THE DEVELOPMENT OF STRATEGIC DOCTRINE

by

Eric S. Mathewson, Major, USAF

Research Report Submitted to the Faculty

In Partial Fulfillment of the Graduation Requirements

Advisor: Major Carl D. Baner

Maxwell Air Force Base, Alabama

March 1998

Distribution A: Approved for public release; distribution is unlimited

Report Documentation Page

*Form Approved
OMB No. 0704-0188*

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE MAR 1998	2. REPORT TYPE N/A	3. DATES COVERED -			
4. TITLE AND SUBTITLE The Impact of the Air Corps Tactical School On The Development of Strategic Doctrine		5a. CONTRACT NUMBER			
		5b. GRANT NUMBER			
		5c. PROGRAM ELEMENT NUMBER			
6. AUTHOR(S)		5d. PROJECT NUMBER			
		5e. TASK NUMBER			
		5f. WORK UNIT NUMBER			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Air University Press Maxwell AFB, AL 36112-6615		8. PERFORMING ORGANIZATION REPORT NUMBER			
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S)			
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)			
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release, distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified	UU	48	

Disclaimer

The views expressed in this academic research paper are those of the author(s) and do not reflect the official policy or position of the US government or the Department of Defense. In accordance with Air Force Instruction 51-303, it is not copyrighted, but is the property of the United States government.

Contents

	<i>Page</i>
DISCLAIMER	ii
PREFACE.....	iv
ABSTRACT	vi
THE AIR CORPS TACTICAL SCHOOL	1
Curriculum.....	2
Purpose	3
Environment	4
Impact.....	5
Conclusion.....	7
THE CONTEXT	9
Economic	10
Political.....	11
Technological.....	14
Conclusion	15
THE THEORISTS	18
The Early Air Power Thinkers.....	18
Douhet.....	19
Trenchard.....	20
Mitchell.....	21
Conclusion	23
THE AIRMEN	25
The Debate.....	26
The Air Corps At Large	29
Conclusion	32
CONCLUSIONS.....	36
BIBLIOGRAPHY	39

Preface

This paper was prompted by poor research. One day, while reading through a book about Air Force history, I came upon a rather strong assertion about the Air Corps Tactical School: “As such, the emphasis of instruction at Maxwell Field shifted more exclusively toward air power topics, with bombardment aviation comprising the focus of study —the idea that air power could threaten a nation’s ability to make war by bombing vital interior areas was born.” The assertion appeared central to the author’s main premise, so I eagerly turned to the chapter notes to find the source. The next time that I was in the library, I looked up the reference in its source document, turned to the correct page, and found that the assertion misrepresented what was written in its source.

I was curious, and began exploring primary source documents in order to understand the true context and meaning of the passage. I eventually found the appropriate information, and assessed the assertion to be inaccurate. It was not an out-and-out misrepresentation, but it certainly did not tell the whole story. I began to ask myself if the Air Corps Tactical School really was the birthplace of all Air Force strategic doctrine?

Many people helped me in the quest to answer this question. I would like to thank Major Carl Baner, my research advisor, for keeping me on track; Dr David Mets, of the School of Advanced Aerospace Studies, for his inspiration and knowledge; the staffs of

the Air Force Historical Research Agency for their patience; Dr Beeler, of the University of Alabama for his scholarly advice; and my wife for continuing to live with me.

Abstract

It may be argued that the Air Corps Tactical School was not the “birthplace of strategic air power doctrine.” Strategic doctrine, in fact, already existed when the School was founded. Additionally, during the inter-war years, it was the Army Air Corps at large, and not the School, which modified the doctrine to fit the contemporary economic, political, and technological contextual realities. The instructors and students at the School may have contributed to the development of strategic doctrine, but their contribution was no greater than that of any other airmen.

During the years between World Wars, the American people did not, as a rule, want to hear about any development of offensive means or methods of war. Neither did they, or their political representatives, want to maintain a large military. President Wilson’s “war to end all wars” meant, to many, exactly that, and little money was forthcoming to the military establishment.

The War Department, and the Army and the Navy, did not want to share the shrinking pot of money with an upstart service —politics and economics argued against not only an independent Air Force, but also against the development of its requisite tools. The contemporary contextual elements shaped the way in which strategic air power doctrine could be formalized. A large variety of primary and secondary source materials must be studied in order to understand the realities and limitations that shaped the development of strategic air power doctrine.

Early theorists imagined air power as an independent and decisive arm of the military that would destroy the enemy's hostile will and ability through the selective and methodical application of strategic air power. Their ideas did not stop at theory, but in fact, included a framework for strategic air power doctrine. The published works of the early air power theorists, along with numerous primary and secondary sources, support this argument.

The Army Air Service, and the Air Corps that followed it, was peopled by a small and intimate band of airmen. These airmen took to heart the lessons of World War I and the concepts of the theorists. They, as a group, through their shared struggle to prove the value of their weapons, evolved strategic air power doctrine. Personal papers, oral histories, published accounts, Air Service and Air Corps records, and general Air Force histories support this premise.

Chapter 1

The Air Corps Tactical School

A questioning atmosphere prevailed at ACTS. Its most important course, called "The Air Force," integrated the teachings of the four other branches of the curriculum (pursuit, attack, observation and bombardment), and at the end of each year its text traditionally went into the wastebasket, to be rewritten in light of the newest thinking. In this climate of change the concept gained strength that the air force had a broader mission than supporting surface forces. As airmen saw it, gaining air superiority might be the mission of pursuit, and obtaining information might be the mission of observation, but was not the mission of the air force as a whole to eliminate the enemy's ability to make war? And could not this broader mission be carried out most effectively by bombardment to destroy the enemy's vital centers?

—Martha Byrd

The Army Reorganization Act of 1920 recognized the Air Service as a combatant arm of the Army.¹ This new-found legal status encouraged the Air Service to request approval to establish schools that would provide the specialized training that it required.² On 25 February 1920, the War Department approved eleven Air Service schools including a Field Officer School that was charged with preparing "senior officers for higher Air Service command duty."³

The Field Officer School, located at Langley Field, Virginia, formally became known as the Air Service Field Officer School in 1922, and then the Air Service Tactical School in 1926.

During this time period, the school's curriculum matured into the basic shape that it was to retain until its closing, namely, general military studies of all military branches, along with a heavy emphasis on how to employ and integrate air power. The curriculum included lectures, practical "map problems," and flying exercises.

In 1931, due to inadequate facilities at Langley Field, the Air Corps moved the Air Corps Tactical School to Maxwell Field, near Montgomery, Alabama.⁴ The school remained at Maxwell until the last class graduated in June 1940.

Curriculum

The Air Corps Tactical School's curriculum was constantly refined over the years, but its basic organization remained relatively constant. The curriculum was comprised of three core, or "subject", areas of study, Air subjects, Ground subjects and General subjects. The Air subjects took up approximately fifty percent of a student's time, while the Ground and General subjects were apportioned roughly twenty five percent each.⁵

Air subjects included an Air Force course (general theory), Air Navigation, Attack Aviation, Balloons and Airships, Bombardment Aviation, Combat Orders, International Air Regulations, Observation Aviation, Pursuit Aviation, and Refresher Flying.⁶ As an adjunct to the Air curriculum, students also took part in flying instruction, demonstrations and exercises, along with tactical "problem solving" table top exercises.

Ground subjects included studies in Anti-aircraft, Cavalry, Chemical Warfare, Coast Artillery, Combined Arms, Field Fortifications, Field Artillery, Infantry, Medical Corps, Air and Ground Logistics, Military Intelligence, Signal Communications, Staff Duties and Troop Leading.

General subjects covered Maps and Photographs, Military Geography and Strategy, Military Organization, Mobilization, Naval Operations, and Orientation.⁷

Purpose

Major General Follett Bradley briefed the Air War College class of 1951 that “each branch, including the Air Corps, had its own tactical school which taught in considerable detail the tactics and techniques of its own weapons.”⁸

The Air Corps Tactical School sought to help its students develop professionally as Army officers and airmen. Over the years, the emphasis in the school was placed increasingly on air power studies. The cornerstone to the air power curriculum was the Air Force course—it was the one course designed to promote air power, its theories and its doctrines.

Major Hume Peabody, Assistant Commandant (1931-1934) and chief instructor of the Air Force course of the 1931-32 school year, wrote in his course notes; “The purpose of this course, ... is to stimulate and to guide our thoughts toward the employment of air forces in the next war, in order that we may fit ourselves by further study and training to command air units of all echelons and to discharge efficiently the duties of an air staff officer.”⁹

Indicative of the approach that the school was taking, was the academic year 1936-37 definition of the “strategical air offensive:”

It can be undertaken when an air force occupies a tenable base or can occupy a tenable base from which operations against the enemy nation can be sustained. It is characteristic of the strategical air offense that both primary strategical objectives are accessible. As long as an air force is in position from which the vital elements of the enemy nation can be attacked, it is waging the strategical offense although its power may be centered on the destruction of the enemy air force. Where there is no

choice except the defeat of an air force that threatens both strategical objectives, the strategical air offense cannot be waged.¹⁰

The School promoted the concept of an independent air force waging, as the 1938 Air Warfare instructor's guide stated, "air warfare exclusively against the enemy national structure."¹¹

In 1939, the school's purpose was described as teaching an officer to think in terms of air power.

Each year a class of perhaps fifty officers convened at the school to investigate all aspects of military aviation by means of field problems, formal lectures, and free-for-all debates that often were pursued after hours outside the classroom. Inspired initially by Mitchell and probably at least aware of Douhet, a cadre of students and faculty members developed a theory of aerial warfare that emphasized the long-range bomber almost to the exclusion of other types of aircraft.¹²

Environment

From all accounts the Air Corps Tactical School operated in a relatively relaxed environment. General Hoyt S. Vandenberg, Chief of Staff of the US Air Force (1948-1953),¹³ recounts that when he arrived at the Air Corps Tactical School "students and faculty alike were told: 'this is a place where we want you to relax and take time off to try to think about what is going on. Get acquainted with your contemporaries.'"¹⁴ According to General Earle "Pat" Partridge, Far Eastern Air Forces commander during World War II,¹⁵ "although students were graded on their work, they were deliberately not given their relative standing in the class, for fear it would lead to hostile competition and unnecessary study."¹⁶

Bernard C. Nalty, in *Winged Shield, Winged Sword: A History of the United States Air Force*, describes contemporary Air Corps life:

The Air Corps had become the prisoner of ease and habit. Except during major maneuvers, such as those in 1931, the men of the Air Corps lived a relatively pleasant life, caught up in an easy routine. Although enlisted men formed at 6:30 A.M. each weekday for a roll call before breakfast, officers normally did not arrive for duty until about an hour later. Flying began at about 8.00 A.M. and continued until 11:30 A.M. when the officers went to lunch. The pilots usually relaxed at the officers' club until about 1:30 p.m. and then returned to the office, hangar, or flight line for another two hours. At about 3:30 p.m. the duty day normally ended. Nearly all officers had their weekends free, as well as a half-day on Wednesdays, and almost no one worked at night.¹⁷

General Carl "Tooey" Spaatz, the first Air Force Chief of Staff,¹⁸ said of his Air Corps Tactical School experience; "Typically, classes were held only in the mornings, the afternoons being devoted to flying and other activities ...tennis, golf, reading, bridge, poker...."¹⁹ Spaatz attended the Air Corps Tactical School in 1925, and suggested that the "academic schedule at the school was less extensive, and probably less rigorous, than it became at later times."²⁰ But, Air Corps Tactical School academic schedules from the 1930's indicate that in the Air Corps in general, and "most of all [in] the Air Corps Tactical School in Alabama, Air Corps officers were free to construct their own curriculum and dogma. The leisurely pace of life in the peacetime army gave them plenty of time to do so,"²¹ Also, apparently, students took time out for required daily rides, polo, a new 18 hole golf course (1934), and many social events.²²

Impact

The ways in which the Air Corps Tactical School is traditionally believed to have contributed to the development of air power, and Air Corps thought in general, is well documented—official records and documents, oral histories, and the works of military historians and Air Force officers.

For example, Thomas Greer, in *The Development of Air Doctrine in the Army Air Arm*, described the Air Corps Tactical School as the “breeding ground” of air theory and doctrine after 1926.²³ Robert Finney, in his *History of the Air Corps Tactical School*, called the school the “birthplace” of “American air doctrine.”²⁴ Phillip S. Meilinger claims in his book, *Hoyt S. Vandenberg: The Life of a General*, that the School “was the intellectual center of the Air Corps,” and that it “introduced” Vandenberg to air power theory.²⁵ According to John Shiner, author of *Foulois and the Army Air Corps, 1931-1935*, “The Chief of the Air Corps, General Fechet, and his staff usually looked to the tactical school for leadership on doctrinal questions.”²⁶

On the other hand, some evidence suggests that this may not be the whole story, and that the Air Corps Tactical School “experience” may have had a different impact on airmen and their air force.

In *Every Inch a Soldier: A Biography of General Augustine Warner Robins* by William Head, General Robins is said to have described the school as a “brief” and “pleasant” experience, but of no other importance.²⁷ Major General Clarence L. Tinker, Seventh Air Force Commander during World War II, is quoted as saying that the school did “little to enlighten him, ... not enough about air power.”²⁸

Martha Byrd’s *Giving Wings to the Tiger*, a biography of Claire Chennault, acknowledges the intellectual discussion about theory and doctrine at the School, but asserts that primarily the “Air Corps Tactical School opened the door to further promotion.”²⁹ Inter-war Air Corps policy, supported by officer service records and oral histories, suggests that only Air Corps officer graduates of the school would be selected

for the Army General Staff and Command College—a necessary “square” to fill in order to move up the Army’s hierarchy.³⁰

Conclusion

The Air Corps Tactical School, by its very existence, provided the Air Corps with a physical manifestation of its validity as a recognized military institution. Beyond this, however, it may be argued that its impact was far less reaching.

The School’s curriculum was certainly designed for the theoretical and tactical education of airmen, and there was evidently extra time for individual thought, but was the School’s institutional function an end in its self? Did it really provide the “theory, principles and doctrine behind the American concept of strategic air warfare”?³¹ Or, did those “revolutionary” ideas already exist within the Air Corps? Strategic air power doctrine may not have been developed by the School, but rather by the Air Corps membership at large—shaped by the concepts of the early theorists, guided by economic, political and technical realities, and simply “enunciated by the Air Corps Tactical School.”³²

Notes

¹ John F. Shiner, *Foulois and the Army Air Corps, 1931-1935*. (Washington DC: Office of Air Force History, 1984), 17.

² *Ibid.*, 44-45.

³ Robert T. Finney, *USAF Historical Studies: NO 100*. (Maxwell AFB: Air University Press, 1955), 7.

⁴ Lawrence S. Kuter, Interview by Hugh N. Ahmann and Tom Sturm, 30 Sep —3 Oct 1974, USAF Oral History. (Maxwell AFB: HRA K239.0512-810), 109-110.

⁵ Robert T. Finney, *History of the Air Corps Tactical School, 1920-1940*. (Washington DC: Center for Air Force History, 1992), 35.

⁶ Finney, *USAF Historical Studies: NO. 100*, 20.

⁷ *Air Corps Tactical School Annual Progress Reports, 1930-40*. (Maxwell AFB: HRA K245.111).

Notes

⁸ Major General Follett Bradley, “Pre-World War II Military Air Doctrines,” Air War College lecture, 26 January 1951. (Maxwell AFB: KRA 239.716251-21).

⁹ Major Hume Peabody, Air Force Course, 1931-1932, instructor notes. (Maxwell AFB: HRA K248.2013A), 1.

¹⁰ Air Force Course draft text, 1936-1937. (Maxwell AFB: HRA 248.101-1), 20.

¹¹ Air Warfare Course, 1938-1939, draft text. (Maxwell AFB: HRA 248.101-1), 48.

¹² Bernard C. Nalty, *Winged Shield, Winged Sword: A History of the United States Air Force*. (Washington DC: Air Force History and Museums Program, 1997), 111.

¹³ General Hoyt S. Vandenberg, Official USAF Biography. (Maxwell AFB: HRA 342-82-032). ACTS class of 1935.

¹⁴ Phillip S. Meilinger, *Hoyt S. Vandenberg: The Life of a General*. (Bloomington: Indiana University Press, 1989), 20.

¹⁵ General Earle E. Partridge, Official USAF Biography. (Maxwell AFB: HRA 342-82-032). ACTS class of 1936.

¹⁶ *Ibid.*, 20; General Earl E. Partridge, interview by LtCol Collins, 12 April 1968, USAF Oral History. (Maxwell AFB: K239.0512-919), 228; Major Ira C. Eaker, “The Air Corps Tactical School,” Air Corps Newsletter, 15 April 1936, 9-10.

¹⁷ Nalty, *Winged Shield, Winged Sword*, 123.

¹⁸ General Carl Spaatz, Official USAF Biography. (Maxwell AFB: HRA 342-82-032). ACTS class of 1925.

¹⁹ David R. Mets, *Master of Airpower: General Carl A. Spaatz*. (Novato, CA: Presidio Press, 1988), 58.

²⁰ *Ibid.*, 58.

²¹ Michael S. Sherry, *The Rise of American Air Power*. (New Haven: Yale University Press, 1987), 51.

²² Jerome A. Ennels, *The Wisdom of Eagles, A History of Maxwell Air Force Base*. (Montgomery, AL: Black Belt Press, 1997), 57.

²³ Thomas H. Greer, *The Development of Air Doctrine in the Army Air Arm, 1917-1941*. (Maxwell AFB: Air University Press, 1955), 30.

²⁴ Finney, *History of the Air Corps Tactical School*, preface.

²⁵ Meilinger, *Hoyt S. Vandenberg*, 16,18.

²⁶ Shiner, *Foulois and the Army Air Corps*, 45.

²⁷ William P. Head, *Every Inch a Soldier: Augustine Warner Robins and the Building of US Airpower*. (College Station: Texas A&M University Press, 1995), 133.

²⁸ James L. Crowder, *Osage General: Major General Clarence L. Tinker*. (Tinker AFB, OK: Tinker AFB Office of History, 1987), 129.

²⁹ Martha Byrd, *Chennault: Giving Wings to the Tiger*. (Tuscaloosa, AL: University of Alabama Press, 1987), 34.

³⁰ Meilinger, 16; Mets, *Master of Air Power*, 56.

³¹ Major General Haywood S. Hansell, *The Air Plan That Defeated Hitler*. (Atlanta: Higgins-McArthur/Longino & Porter, Inc., 1972), preface.

³² Maurer, Maurer, *Aviation in the U.S. Army, 1919-1939*. (Washington DC: US Government Printing Office, 1987), 331.

Chapter 2

The Context

What self-interest and strategy made compelling, the nation's mood made politic. America's response to the bloodletting and disillusionment of World War I ruled out dispatch of another great army to fight abroad. In the 1920's it had been neither prudent nor especially compelling for airmen to offer their bombers as a substitute for the expeditionary armies of the past. In the 1930's, as crises abroad imperiled American interests, airmen guardedly advanced the case for a bomber force that could strike across the seas. Air power appealed as well to a deeper strain of anti-statism and anti-militarism in American culture because its reliance on a small technically sophisticated elite apparently avoided the burdens of conscription, taxation, and death. It was the perfect weapon for a nation that wanted the fruits of centralized state power without challenge to traditions of decentralized authority and individual autonomy.

—Michael S. Sherry

As soon as World War I ended, “the air forces and aviation industries plummeted from the pinnacle of wartime expansion to the verge of extinction.”¹ A war-weary nation drew the purse strings tight and returned to a traditional American isolationism.² No one seemed interested in the development of air power as an offensive weapon —“the nation’s psychology was defensive.”³ Against this backdrop, the leaders of the Air Service looked for ways to establish a doctrinally independent air force. The Army and Navy argued that air power had utility only as an auxiliary arm, and did not deserve the recognition or budget of a separate military force.⁴

Economic

Appropriations for the Air Service during the last year of the war were \$460 million (Fiscal Year 1919), but the following year, with the war over, congress lowered the amount appropriated to \$25 million (Fiscal Year 1920). In Fiscal Year 1921, the Air Service budget was cut again, this time down to \$19.8 million, and once again, in Fiscal Year 1922, to \$12.9 million.⁵ The budget remained at roughly this level until early Air Corps expansion in the late 1920's—but even after an increase in Fiscal Year 1928, it still remained almost always about half the amount requested by the Air Service and then the Air Corps leadership.⁶

In Fiscal Year 1931, with the Great Depression just beginning, “President Hoover called for spending cuts. Because of the depression, he needed to shave expenses to prevent a deficit,...In the end the Air Corps was permitted to spend about \$36 million,” out of a total War Department budget of \$409 million.⁷ In Fiscal Year 1932, the last year of the Air Corps’ five-year expansion plan (Fiscal Years 1927-1932), flying was drastically reduced, and special cost savings programs were initiated—the five-year plan’s completion was postponed. There were concerns over the very survival of the aircraft industry, and even over whether or not the Air Corps could still perform its mission.⁸

By 1936, after numerous austerity measures, the Air Corps had still not completed its much needed, five-year expansion plan of ten years earlier. The early 1930's were rife with reductions in aircraft numbers and personnel, limited procurement, poorly maintained facilities, and furloughs for many officers and higher paid civilian employees

—little money was available for purchasing or developing new aircraft and support equipment.⁹

Appropriations for the Air Corps began an upward trend after 1936, rising from \$41.1 million in Fiscal Year 1937 to \$83.1 million in Fiscal Year 1939. “With more money the Air Corps procured additional pilots and mechanics and bought new and better airplanes and accessories; GHQ Air Force shored up its units, secured extra gasoline for training and operations, and expended more ammunition in bombing and gunnery practice.”¹⁰

Political

In April 1919, General Pershing, Commander of the American Expeditionary Force during World War I, appointed a board to study lessons learned from Army aviation experiences during the war. The board’s findings suggested that the Air Service’s role was to support ground maneuver units, and that it should “stay under the control of ground force commanders.”¹¹ The National Defense Act of 1920 officially established an American air arm, but “the law did not alter the status of aviation.”¹² Official War Department policy maintained that air power was an auxiliary combat force well into the 1930’s.

Until the early stages of World War II, numerous boards and committees were convened to study the question of air power’s role in America’s defense. According to General Arnold, “the surprising thing to me, in retrospect, is that so few saw the air’s real possibilities. The Crowell Board did make a few positive recommendations. Then followed the LaGuardia Board, the Lassiter Board, the Select Committee of the House of Representatives called the Perkins Committee, the Morrow Board, and the Baker Board.

Except for the [Baker Board], which met in 1934, by which time aviation was certainly coming into its own, was unanimous in stating, ‘independent air missions have little effect upon the issue of battle and none upon the outcome of war.’”¹³

Thus, the Air Service, and the Air Corps after 1926, remained a component of the Army, with its primary mission being direct support of ground forces.¹⁴ Air power had to find another path for justifying the development of the weapons and the strategic doctrine requisite for independent status—a path that required vision and careful diplomacy.

David Mets, in his book *Master of Air Power*, writes that although Arnold “was Mitchell’s most stalwart supporter, ... [Arnold] admitted that his hero really had not advanced the cause of air power that much, and that America did about as well as she could at the time, for the obstacles to the development of airpower really were technical and budgetary.”¹⁵ This suggests that the political contemporary sensitivities may have required a more subtle marketing of air power’s capabilities.

Representative of the political and military resistance to concepts of independent and decisive air power was ostensibly the court-martial of Brigadier General Mitchell in 1925. “To most General Staff officers, airpower meant preventing enemy aircraft from attacking friendly troops or using friendly aircraft to attack enemy troops and supplies near the battlefield. It did not mean achieving victory from the sky—a proposition that many Army leaders viewed with thinly veiled scorn. Mitchell’s public outcries led many Army officers to reject future proposals for air force autonomy out of hand.”¹⁶ Or as Arnold remarked, “they seemed to set their mouths tighter, draw more into their shell, and, if anything, take even a narrower view of aviation as an offensive power in warfare.”¹⁷

It may be argued, that in order for the Air Corps to gain the freedom it sought, it had to follow a course of compromise, quietly developing its weapons and doctrine, while outwardly acquiescing to the General Staff's desires in order to gain budget. The Air Corps leadership could not afford to self-destructively attack the system, as Mitchell had done, or arguably, as the more outspoken airmen at the Air Corps Tactical School would have them do. "Most [Air Corps leaders] worked to improve relations with the War Department while securing high-visibility peacetime missions that stressed airpower's ability to defend the nation. Although Mitchell the prophet remained uppermost in their minds, so too did Mitchell the martyr."¹⁸

Following Mitchell's lead, but not his methods, the Air Corps, "between 1925 and 1935, ... did more than merely survive years of economizing. It obtained a mission, aerial coast defense, that justified the creation of a centrally controlled strike force, the General Head Quarters (GHQ) Air Force, and was seeking another mission, strategic bombardment, that seemed likely to free it from the Army."¹⁹

The Air Corps' efforts culminated in the 1935 Army Training Regulation 440-15. This regulation "stated that aerial coast defense operations would be based on joint action of the army and navy," and that air power would be an "adequate instrument for distant destruction of an enemy fleet as well as for strategic bombardment."²⁰ In addition to defining the Air Corps mission in terms of coastal defense and the traditional direct support of ground forces, TR-440-15 also allowed for air power to attack a "variety of targets beyond the national coasts and areas of ground operations."²¹ For the first time the Air Corps had defined missions that were acceptable to ground and air officers alike.²² "Because the bombardment arm of the Air Corps offered the only means of

implementing this new concept of warfare, bombardment rather than pursuit began to be viewed as the most important element in an air force.”²³

Technological

“Mitchell’s comments on the importance of attacking the enemy’s vital centers and his belief that the airplane represented an entirely new method of warfare continued to win advocates within the Air Corps during the late 1920’s. Still, circumstances prevented the doctrine of strategic bombardment from becoming paramount in the Army air arm by 1931. The Air Corps possessed no aircraft capable of traveling great distances with heavy bombloads. Further, American national policy discouraged offensive military strategy.”²⁴

In mid-1933, [Major General Foulois] had asked the War Department to approve research funds for an experimental bomber able to carry a ton of bombs 5,000 miles at a speed of 200 miles per hour. He soft-pedaled strategic bombing —despite his personal belief in this form of aerial warfare, he realized it was not yet an acceptable justification in the opinion of the General Staff —and emphasized the defensive value of such an airplane, which could deploy rapidly to protect either coast, Panama, Hawaii, or Alaska.²⁵

This development program ran almost concurrent with the development of TR-440-15, and ultimately resulted in the B-17 bomber aircraft. As Arnold recounts, “the first real American air power appeared...Early in the spring of 1936, the first two four-engine bombers landed at Langley Field, Virginia.”²⁶ The Air Corps now had an aircraft that could implement TR 440-15, and its greater concept of strategic bombardment, based on the ideas and doctrines of Mitchell, Douhet and Trenchard, as evolved by Air Corps airmen collectively.²⁷

Conclusion

Post World War I America was not interested in war. Military growth was limited by budget constraints, and the traditional military mindset of the War Department. The Air Corps, in order to establish its efficacy, focused its energies on developing a credible defensive strategic bombardment capability. “The strategic argument for the shift to bombers, therefore, had to be made on the basis of their value as coastal defenders.”²⁸ In order for bombers to be effective in this role, formal strategic bombing doctrine and technology had to be developed.²⁹ This increased emphasis on doctrine and technology encouraged the GHQ Air Force to “incorporate “the Trenchard-Douhet-Mitchell notion of a centrally controlled mass, functioning as an offensive striking force and not tied to ground operations.”³⁰

It may be argued, therefore, that a limited budget forced the Air Corps to seek only one primary means of waging war and establishing credibility; political expediency may have further defined the means chosen; and technology may have specified the mode of implementation. By 1935, airmen had the theory, the doctrine and the means to implement strategic bombing

Notes

¹ John H. Morrow, Jr., *The Great War in the Air: Military Aviation from 1909-1921*. (Washington DC: Smithsonian Institution Press, 1993), xiii.

² Maurer, Maurer, *Aviation in the U.S. Army, 1919-1939*. (Washington DC: US Government Printing Office, 1987), 44.

³ Thomas M. Coffey, *HAP: The story of the US Air Force and the Man Who Built It, General Henry “Hap” Arnold*. (New York: Viking Press, 1982), 197-198.

⁴ John F. Shiner, *Foulois and the Army Air Corps, 1931-1935*. (Washington DC: Office of Air Force History, 1984), 12; Historical Studies: No. 25, 41-43; Historical Studies: No. 89, 22; McClendon, *The Question of Autonomy For The US Air Arm, 1907-1945*. (Maxwell AFB: Air University Press, 1950), 72-73, 84-87.

⁵ Maurer, *Aviation in the U.S. Army*, 44-46.

Notes

⁶ Ibid., 199-200.

⁷ Ibid., 201.

⁸ Ibid., 201-202.

⁹ Ibid., 345-349.

¹⁰ Ibid., 350.

¹¹ Maurer, *Aviation in the U.S. Army*, 40-41; Chase C. Mooney and Martha E. Layman, *Organization of Military Aeronautics, 1907-1935 (Congressional and War Department Action)*. (Maxwell AFB: AAF Historical Study, 1944), 37-48.

¹² Ibid., 44.

¹³ Henry H. Arnold, *Global Mission*. (New York: Harper & Brothers, 1949), 131. Concurrent with Pershing's 1919 Board, Secretary of War Baker appointed the Crowell Committee which recommended further development of civil and military aviation, along with the establishment of a separate air force—its findings were overruled by Secretary Baker. The Lassiter Board (1923), Lampert Committee (1924), and Morrow Board (1925) all held positions consistent with Pershing's 1919 board. The LaGuardia Board (1926) likewise, but it also contributed to the Air Corps Act which elevated the Air Service to Corps status, as the Army Air Corps. The Baker Board (1934) created GHQ Air Force a virtually independent war fighting air force, responsible for its own development of doctrine—the Howell Board (1935) confirmed the Baker Board's findings.

¹⁴ “The Air Corps Act of July 1926 changed the Air Services' name to the Air Corps and provided an assistant secretary of war for air and special representation on the War Department's General Staff. It also authorized an Air Corps of 20,000 men and eighteen hundred aircraft, but Congress failed to fund the expansion.” School for Advanced Aerospace Studies (SAAS), *The Paths of Heaven: The Evolution of Air Power Theory*. (Maxwell AFB: Air University Press, 1997), 105.

¹⁵ David R. Mets, *Master of Airpower: General Carl A. Spaatz*. (Novato, CA: Presidio Press, 1988), 62; Arnold, *Global Mission*, 157.

¹⁶ SAAS, *The Paths of Heaven*, 106.

¹⁷ Ibid., 106; Arnold, *Global Mission*, 122.

¹⁸ Ibid., 107.

¹⁹ Bernard C. Nalty, *Winged Shield, Winged Sword: A History of the United States Air Force*. (Washington DC: Air Force History and Museums Program, 1997), 133.

²⁰ Benjamin Franklin Cooling, *Case Studies in the Achievement of Air Superiority*. (Washington DC: Center for Air Force History, 1994), 45; Shiner, *Foulois*, 227-229; Craven and Cate, *AAF in World War II, Vol I; Plans and Early Operations*, 64-69.

²¹ Stephen Lee McFarland, *To Command the Sky: The Battle for Air Superiority Over Germany, 1942-1944*. (Washington DC: Smithsonian history of aviation series, 1991), 31. TR 440-15 was a refinement of a draft version of Air Corps doctrine authored by Brigadier General Charles E. Kilbourne, Chief of the War Plans Division of the Army General Staff. Kilbourne was not a flier, but was, to some extent, a believer in air power.

²² Nalty, *Winged Shield*, 150.

²³ Martha Byrd, *Chennault: Giving Wings to the Tiger*. (Tuscaloosa, AL: University of Alabama Press, 1987), 38.

Notes

²⁴ Shiner, *Foulois*, 43.

²⁵ *Ibid.*, 142. Major General Benjamin D. Foulois was Chief of the Army Air Corps 1931-1935.

²⁶ Arnold, *Global Mission*, 154.

²⁷ Air Force Course draft text, 1937-1938: Air Operations —Counter Air Force. (Maxwell AFB: HRA “The Hansell Papers”), 62-67; McFarland, *To Command the Sky*, 31.

²⁸ Mets, *Master of Air Power*, 68.

²⁹ *Ibid.*, 97; Cooling, *Case Studies*, 45.

³⁰ Cooling, *Case Studies*, 45.

Chapter 3

The Theorists

Douhet, Liddell Hart, Mitchell, and others had prepared the way by their talk of vital centers and the achilles' heel of the modern nation, implying an enemy's vulnerability to attack on selected targets.

—Michael S. Sherry

These ideas developed gradually, as a result of his World War I experience and the relationships [Mitchell] established with British air marshal Sir Hugh Trenchard and, to a lesser extent, with the Italian general Giulio Douhet.

—Phillip S. Meilinger

The Early Air Power Thinkers

In the Army Air Corps, it was generally acknowledged that air power theory was based on the concepts of an Italian, Giulio Douhet, and an Englishman, General Hugh Trenchard, and evolved by an American, Brigadier General William “Billy” Mitchell.¹ These men envisioned a new dimension to warfare. They applied the ideas of the classical military theorists, such as Clausewitz and Jomini, and the contemporary theorists, Liddell Hart and J.C. Fuller, to their ideas of how to best use aircraft in war.

Current thinking suggests that “the broad outline of strategic air power had been described in the era of World War I by such pioneers as General Smuts, General Douhet, General Mitchell, and Lord Trenchard. Their concepts, however, had never been finally

developed into specific principles and doctrines of strategic air employment.”² It can be argued, however, that these men, collectively, went beyond pure theory, and began to develop and implement strategic air power doctrine, or at the very least, a sturdy framework for it.

Douhet

Douhet argued that the “speed and freedom of action of the airplane” made it unique. The airplane’s special qualities made it imperative that air forces be accorded independent status already enjoyed by both land and sea forces.³ An air force’s potential, based on the nature of advancing technology, and the likelihood of future wars being fought between warring industrial states, suggested that it could win wars quickly and decisively. The aircraft, or better, the “battleplane,” according to Douhet, was an offensive weapon that could destroy an enemy’s will to wage war by attacking its political and economic centers of gravity.⁴ He believed that massed, bombing formations could not be stopped, except by other aircraft—and hence that they would be the decisive weapon of future wars.⁵

Douhet’s work was not based upon experiences in war, but nonetheless, provided direction on how to use strategic air power to win wars. In *The Command of the Air*, he prescribed a possible course of action for Italy to take in using strategic air bombardment to win a future war on the European continent. Some of his ideas may be unrealistic, but in the end, they provided a good starting point for contemporary war planning. It may be asserted that Douhet’s “theories” were indeed, in many ways, doctrine, since many of them were ultimately also tested in war.⁶

Trenchard

Trenchard commanded the Royal Flying Corps, and then the Royal Air Force, during World War I. His ideas not only helped the British Air Force gain independent standing, but also laid the groundwork for its future strategic bombing doctrine. Owing to the stagnation of trench warfare during the land war, Trenchard recognized the aircraft's potential to overcome the impasse and strike directly at an enemy's ability to fight. Under Trenchard, the Royal Air Force's "mission was strategic bombardment—in Germany when possible—and its operations had slowly mounted in intensity."⁷ "Trenchard's plan to attack industry and transportation from the air was a strategy quite similar to the strategy behind the dying Pax Britannica."⁸ He maintained that disabling an enemy's means for waging war would ultimately lead to its "moral" collapse, and that the "bomber would always get through."⁹

"The indomitable spirit of Trenchard forged the RAF and gained acceptance in Britain of a revolutionary doctrine of war."¹⁰

British strategic bombing was born with this [Trenchard] scheme to have an air force strike deep in enemy country at the very source of war supplies. Such operations were too distant from the front to be of any concern to those locked in the deadly struggle over terrain; hence it was thought that the force should be entirely independent of surface control. It was a force aimed at the enemy's means to wage war, not specifically at his army in the field.¹¹

Trenchard's theories were tried and tested in wartime, although on a limited scale. The Royal Air Force, as an independent air arm, did engage in a strategic bombing campaign against Germany, and did develop and codify strategic air power doctrine.

Mitchell

Mitchell, who became a disciple of the thoughts and methods of both Douhet and Trenchard during his World War I service, is considered America's first and foremost air power theorist.¹² The end of the war cut short his attempts to demonstrate the validity of strategic bombing by an independent air arm, although he spent the remainder of his life advocating the creation of such a force. He was eventually court-martialed in 1925 for his outspokenness.

Mitchell wrote in a 1924 Saturday Evening Post article,

The time honored method of winning wars, by the defeat of an enemy's armies in the field had lost its significance in the face of a strategic revolution. Aviation promised victory by the destruction of an enemy's war making potential ... Mighty industrial centers were at once the key to making war and targets vulnerable to air attack. Wars carried on through the air, promised to make war briefer, more humane and less expensive because industries once destroyed could not be replaced in the duration of modern wars.¹³

During the 1920's Mitchell synthesized the theories and doctrines of Douhet and Trenchard, took stock of the rapidly improving technology available, and lessons learned from World War I, and began aggressively promoting an independent air force, with strategic bombing as its main weapon.¹⁴

Many have argued that the concepts espoused by Douhet, Trenchard, and Mitchell, provided nothing more than a "broad outline" of strategic air power that they had never fully developed.¹⁵ But, Mitchell's 1923 "Notes on the multi-motored bombardment group," for example, defined strategic bombardment and the roles of transport, pursuit and escort aviation. He even included suggested target lists, how to best attack targets in order to achieve desired strategic results, organization, weapons, and the distinction between civilian and military targets.¹⁶

During World War I, Mitchell led air offenses in support of the Meuse-Argonne and St.-Mihiel ground offenses. His massed air forces successfully attained air superiority, by bombing German airfields and isolated defending German land forces by bombing their lines of communication, supplies and reinforcements.¹⁷ General Henry H. Arnold, Commander of the Air Corps during World War II, described the offensives: “The massed air-striking power, including about 1500 allied planes in all, had been more of a ‘tactical’ troop-support performance than an independent one. But bombardment had played a part in the coordinated attacks on both the flanks, and on the supplies and communications behind the lines of the enemy. There was talk of the further ‘strategic’ work this independent allied striking force, the air on its own for the first time, would carry on in air raids against Berlin itself, etc. Before such operations could be implemented, it was November, 1918.”¹⁸

Mitchell certainly went beyond simply theory in his planning, coordination and implementation of these air offenses. He had begun to develop doctrine. Although nothing appears to have been written during the war, it may be inferred from Mitchell’s many articles, books and reports immediately following the war and until his death in 1935 that it had, in fact, existed. For example, in 1919, Mitchell sponsored an article recommending that “the moment that aircraft reach that stage of development which will permit one ton to be carried from the nearest point of a possible enemy’s territory to our commercial and industrial centers, and to return to the starting point, then national safety requires the maintenance of an efficient air force adapted for acting against the possible enemy’s interior.”¹⁹

He also, in fact, went into such detail in his “theories” as to suggest the number and types of aircraft required for waging war successfully.

Conclusion

These three early air power theorists, and perhaps doctrinal thinkers, clearly represented strategic air power as the decisive arm of the military, and an enemy’s industrial, political, agricultural, and even population centers as its targets. They provided guidance on how to apply their theories, and described the tactics necessary for implementation. The question becomes not if, but to what extent Douhet, Trenchard, and especially Mitchell, shaped future strategic air power doctrine and the airmen at the Air Corps Tactical School who refined it.

Notes

¹ Lieutenant General Ira C. Eaker, interview by Cadet Richard Tobin, USAF Oral History, March 1974. (Maxwell AFB: HRA K239.0512-918), 10; The School of Advanced Aerospace Studies (SAAS), *The Paths of Heaven: The Evolution of Air Power Theory*. (Maxwell AFB: Air University Press, 1997), 79.

² Major General Haywood S. Hansell, *The Air Plan That Defeated Hitler*. (Atlanta: Higgins-McArthur/Longino & Porter, Inc., 1972), 6.

³ Giulio Douhet, *The Command of the Air*. (Washington DC: Office of Air Force History, 1983), 5.

⁴ *Ibid.*, 58.

⁵ *Ibid.*, 55.

⁶ *Ibid.*; “Air Corps Tactical School: The Untold Story,” article by Air Command and Staff College students, May 1995, 14.

⁷ Wesley F. Craven, *The Army Air Forces Prior To World War II*. (Maxwell AFB: Air University Press, 1949), 15.

⁸ Dale O. Smith, *U.S. Military Doctrine, a Study and Appraisal*. (New York: Duell, Sloan and Pearce, 1955), 132.

⁹ Stephen Lee McFarland, *To Command the Sky: The Battle for Air Superiority Over Germany, 1942-1944*. (Washington DC: Smithsonian history of aviation series, 1991), 24; Craven, *The Army Air Forces*, 133.

¹⁰ Smith, *U.S. Military Doctrine*, 134.

¹¹ *Ibid.*, 122.

¹² SAAS, *The Paths of Heaven*, 79,108; McFarland, *To Command the Sky*, 3.

Notes

¹³ Alfred Francis Hurley, *The Aeronautical Ideas of General William Mitchell*. (Princeton University, Ph.D., 1961), 164; Brigadier General William Mitchell, "Aeronautical Era," *Saturday Evening Post*, 20 December 1924, 3.

¹⁴ Brigadier General William Mitchell, *Winged Defense; The Development and Possibilities of Modern Air Power—Economic and Military*. (New York, London: G.P. Putnam's sons, 1925), preface.

¹⁵ Hansell, 6.

¹⁶ Brigadier General William Mitchell, "Notes on the multi-motored bombardment group, day and night." Reproduced from a typewritten copy, 1923.

¹⁷ Craven, 14-15.

¹⁸ General Henry H. Arnold, *Global Mission*. (New York, Harper & Brothers, 1949), 158.

¹⁹ Hurley, *The Aeronautical Ideas*, 76-77; Recommendations concerning the establishment of a department of Aeronautics—prepared by direction of Brigadier General William Mitchell, by Colonel Townsend F. Dodd, 17 April 1919, 3.

Chapter 4

The Airmen

The Air Corps Tactical School—which has expanded now into our Air University as you know—in those days did not form aviation doctrine, strategy and tactics. It codified them—that’s the purpose it served. Now a little bit later on, as it got stronger and got better people and began to be a real tactical school, its instructors, who were carefully selected, and they were able pilots and had had experience in the air force, either during the war or in tactical groups, exercised much influence, but the tactics and strategy had already been determined. They just had to codify it and modify it with advanced ideas as we learned more and more from our experience and from foreign influences.

—Lieutenant General Ira C. Eaker

It has been generally argued that the instructors and students of the Air Corps Tactical School developed the “strategic and tactical doctrines that would later guide our air campaigns in World War II.”¹ These same instructors and students acknowledged that “Mitchell had been instrumental in founding the school, [and that] his bombing manual served as a textbook.”² They believed that his ideas, along with those of Douhet and Trenchard, had laid the “foundation” which the School then “refined.”³ What then, does refined mean? It can be argued that the airmen of the School only made tactical adjustments to an already established strategic doctrine of the early air power theorists, in light of newly available technology and political expedience.

The Debate

Central to the traditional argument that the Air Corps Tactical School, was the birthplace of strategic air power theory and doctrine, is the great pursuit/bombardment debate of the 1930's. It has been asserted that this debate ultimately resulted in the strategic bombing doctrine employed during the air war against Germany during World War II.⁴

“From 1932 to 1936 a battle raged in the Tactical School over whether pursuit or bombers could win air superiority.”⁵ “On this question the Air Corps Tactical School in 1932 was split by the intense and deep convictions of two rival elements: the Bombardment Section under the driving intensity of Ken Walker and Harold George, and the Pursuit Section, under the equally partisan convictions of Claire Chennault. The whole concept of strategic air power hung upon the validity of the rival claims....”⁶ Martha Byrd, in *Chennault, Giving Wings to a Tiger*, described the bomber/fighter debate at the Air Corps Tactical School as an “ongoing debate on air doctrine [that] dominated the scene, sweeping through the classrooms and offices of Austin Hall like a tornado, sucking everyone into its vortex.”⁷

In the end, the bombardment advocates won the debate, but in order to assess its overall impact, it is essential to understand the people and principles involved, and what effect the debate had on the Air Corps as a whole. It is likely that strategic air power doctrine, as conceived by Mitchell, Douhet, and Trenchard, was little influenced by the debate, and that it was this doctrine that was ultimately implemented during World War II. The debate at the Air Corps Tactical School, therefore, may have indeed been a peripheral discussion, and, with further study, may prove to have not played as

significant a role in the formulation of Air Corps strategic doctrine as is generally believed.

Among the “most articulate” of the “bombardment” advocates during the debate were, Captain Harold L. George, and First Lieutenant Kenneth N. Walker, and Major Donald Wilson—all were instructors.⁸ The primary “pursuit” proponent was Captain Claire L. Chennault, also an instructor.

Captain Harold L. George, a Mitchell protégé, has been described as having a “strong character and wide aviation experience... imagination, logic,... and persuasiveness.”⁹ General Lawrence S. Kuter, Commander of the Pacific Air Forces in the late 1950’s,¹⁰ considered George to be one of the “intellectual leaders” of the bombardment group.¹¹ He was also the “Director of the Department of Air Tactics, as well as Chief of the Air Force Section, he set about the establishment of overall air power doctrine within which these internal battles among the air protagonists might be brought to order.”¹²

Major Kenneth Walker, “as instructor in bombardment, held a pivotal position.¹³ Those who observed him during these years invariably mention his intensity, his chain smoking, his habit of pounding furiously away at his typewriter in a posture of frustration and near frenzy. His position grew steadily more clear and more firm; a strategic role for air power, implementation by daylight precision attacks on critical industrial targets, and offensive bombardment rather than pursuit as a deterrent or defensive force.”¹⁴ “With the hero influence of Mitchell reinforcing all his experience and conclusions to date, Walker moved into full stride. He had found his professional niche. It seemed obvious to him

that the bomber would replace the fighter as the determining element in the Air Corps of the future.”¹⁵

Major Donald Wilson was later the author of the “industrial web” paper, the basis for AWPD-1, the seminal plan for the strategic bombing campaign in Europe.¹⁶ He maintained that “bombardment aviation, properly employed, can shatter a nation’s will to resist; it can destroy the economical and industrial structures which made possible the very existence of modern civilization.”¹⁷ Wilson’s concept was “future wars for survival would be between industrial nations; continuation of the war would depend upon maintaining intact a closely-knit and interdependent industrial fabric.”¹⁸ His plan, he claimed “originated in the Air Corps Tactical School in 1933-34.”¹⁹ He maintained that the “weapon of precision bombing gave us an instrument which could cause collapse of this industrial fabric by depriving the web of certain essential elements—as few as three main systems such as transportation, electrical power and steel manufacturing would suffice.” He recognized Douhet, Trenchard, and Mitchell “as prophets, especially Mitchell, [but] denied them any credit for the theory of industrial fabric.”²⁰

Major Claire Chennault, the leading pursuit advocate, who for “intensity, stubbornness, and vehemence, matched Walker round for round,” argued that bomber aircraft were ultimately vulnerable to fighters. He maintained that the only effective method of enabling bombers to wage an offensive war was to first win air supremacy through the use of fighters. At the end of his tenure as an instructor at the Air Corps Tactical School, Chennault retired. He blamed his unpopular stand on the role of pursuit aviation as the reason for his de-selection for the Army Command and General Staff School, and his failure to win further promotion.²¹

It is apparent that, for those involved, an intense argument over the primacy of strategic bombardment took place at the Air Corps Tactical School. But, for the majority of the airmen in the Air Corps, the debate, and the School, may not have represented anything new at all. The Air Corps was an extremely small organization, with less than 1600 officers at any given time in the years from 1926 until World War II—these airmen knew each other well, and had often discussed this very issue.²² In addition, it can be argued that Air Corps field exercises had repeatedly shown that intercepting bombers was at best, difficult.²³ Even with “ground observers,” a World War I practice,²⁴ interception was improbable, especially after the advent of the multiengine bomber, which flew faster and higher than any existing pursuit aircraft.²⁵

The Air Corps At Large

As suggested above, many different views existed among airmen, concerning the impact of the Air Corps Tactical School and the “great bombardment/pursuit” debate, on the development of strategic air power doctrine.

General Vandenberg recollected that “his two years at Maxwell proved remarkably unremarkable.” He also observed that although the “highly charged intellectual environment at the Tactical School still spawned endless debates over the proper role of air power,” these same discussions were taking place among all aviators in the Air Corps.²⁶

Lieutenant General Earle W. Barnes, Commandant of the Air Command and Staff School in 1946,²⁷ said that “word got around; I mean, this is that kind of thing. We talked together and we would have these arguments, of course, just like Chennault who was a very—he was opinionated in his own right about fighters and so was Hal George in

bombers. You had these arguments that went on everywhere.”²⁸ Lieutenant General Barnes also did not think that the Air Corps Tactical School was very persuasive and influential “throughout the whole air force,” in fact, he considered that “this business between a fighter and a bomber is just ridiculous.”²⁹

Lieutenant General Ira C. Eaker, commanding general of all United States Army Air Force forces in the United Kingdom in 1944,³⁰ disassociated the School debate from contemporary Air Corps doctrine and strategy—for him, the bombardment/pursuit debate had little effect on the Air Corps at large.³¹ When asked about the Air Corps Tactical School formulating doctrine he responded; “I think formulated would be a little too...er, big a word. We worked out tactics by having annual or semi-annual maneuvers...and upon those tests we based our doctrine.” “The Air Corps Tactical School...did not form aviation doctrine, strategy and tactics. It codified them—that is the purpose it served.”³²

During the same interview, Eaker went farther; “I have the feeling that perhaps from reading some books like Hansell’s book [*The Air Plan That Defeated Hitler*], you may have decided that the Air Corps Tactical School told the active flying groups and commanders what to do. It was the other way around. We worked out what we thought was sound doctrine, and they adopted it and codified it and put it into proper documentation.”³³

Major General Leon W. Johnson, Medal of Honor winner and bomber leader during World War II,³⁴ once remarked that the only thing significant thing about the School’s contribution to Air Corps doctrine was that its specific targeting plan, and its associated requirements (AWPD-1), helped establish the force structure initially used in the air war against Germany.³⁵ Johnson also asserts that strategic targeting in the European Theater

was done by the Eighth Air Force staff, and did not use the AWPD-1 as a guide.³⁶ He describes the instruction at the school as uninspired and dogmatic when he attended in 1939—“I realized that [they] didn’t know anymore than I knew.”³⁷

General Douglas MacArthur’s air commander, in the South West Pacific campaign of World War II, General George C. Kenney,³⁸ acknowledged in an oral interview that he had attended the Air Corps Tactical School, but did not consider the experience noteworthy.³⁹ General Curtis LeMay, World War II bomber leader, and Chief of Staff of the Air Force in the early 1960’s,⁴⁰ described what was taught at the School as being “180 degrees off from the facts of life out where the lead was flying around...I think we all had the general idea of what had to be done, but we didn’t have the tools.”⁴¹ In his autobiography, *Mission With LeMay*, he did not even mention the Air Corps Tactical School.⁴²

The World War II Chief of the Air Corps, General “Hap” Arnold wrote, in his book *Global Mission*, “as regards strategic bombardment,...We felt out in the 1st Wing, that we were doing much to furnish the practical tests for, and proofs of, the Maxwell Field theories. A different attitude from Douhet’s toward bomber escort and a very different view of precision bombing resulted.”⁴³ Arnold refers, elsewhere in his book, to the Air Corps Tactical School as the “developer of strategic and tactical doctrines.” His book, however, leaves the reader with the impression that the doctrines did not originate at the School, but were really those of Douhet and Mitchell, and that Air Corps doctrine was primarily a result of efforts made by the operational units.⁴⁴ Additionally, Arnold appears to not have considered the bombardment/pursuit debate as significant, he asserts that “one key problem that had been argued informally for several years within the Air

Corps was the fighter-versus-bomber controversy, ” but he never mentioned the ACTS as playing a pivotal role in this discussion.⁴⁵

Those involved in the debate, and their supporters in the School, of course saw things altogether differently. They maintained that the Air Corps Tactical School was developing new and radical strategic concepts and doctrines. According to General Kuter, airmen outside the school, and debate, were “solely concerned with the physical aspects of air tactics—flying, bombing, shooting, gunnery, everything related to the physical equipment.”⁴⁶ He suggests that outside of the School “tactical concepts and doctrines” were not a matter of “common conversation.”⁴⁷

Conclusion

It can be argued, that the bombardment/pursuit debate, and doctrinal discussions in general, at the Air Corps Tactical School, were simply a reflection of what was occurring in the Air Corps at large. The airmen instructing and attending the School were representative of the force, and that no unique genius existed at the School. The debate that they were engaged in was “intellectually stimulating,” but regardless, the theories and doctrines of the early air power thinkers still held true. The Air Corps, in its entirety, was still engaged in the process of formalizing its strategic doctrine—a doctrine that already existed, as handed down to all airmen, by Mitchell, Douhet, and Trenchard. Guiding that process were the economic, political and technological contextual elements.

Notes

¹ Henry H. Arnold, *Global Mission*. (New York: Harper & Brothers, 1949), 149.

² School of Advanced Aerospace Studies (SAAS), *The Paths of Heaven: The Evolution of Air Power Theory*. (Maxwell AFB: Air University Press, 1997), 108; Major General Clayton Bissell, interview by Brigadier General George W. Goddard, USAF Oral

Notes

History, 22 February 1966. (Maxwell AFB: HRA K239.0512-987), 8-10; Alfred Francis Hurley, *The Aeronautical Ideas of General William Mitchell*. (Princeton University, Ph.D., 1961), 128.

³ Arnold, *Global Mission*, 189.

⁴ Stephen Lee McFarland, *To Command the Sky: The Battle for Air Superiority Over Germany, 1942-1944*. (Washington DC: Smithsonian history of aviation series, 1991), 27-28; Hansell, *The Air Plan*, 11-12.

⁵ McFarland, *To Command the Sky*, 28-29; Hansell, *The Air Plan*, 12-20; Robert T. Finney, *History of the Air Corps Tactical School, 1920-1940*. (Washington DC: Center for Air Force History, 1992), 33.

⁶ Hansell, 12.

⁷ Martha Byrd, *Chennault: Giving Wings to the Tiger*. (Tuscaloosa, AL: University of Alabama Press, 1987), 39.

⁸ *Ibid.*, 39; Lawrence S. Kuter, Interview by Hugh N. Ahmann and Tom Sturm, 30 Sep —3 Oct 1974, USAF Oral History. (Maxwell AFB: HRA K239.0512-810), 111.

⁹ Hansell, 13. Harold George was a student in the ACTS class of 1932, an instructor 1933-1936, and retired as a Lieutenant General in 1946. Samuel J. Walker, *Future Stars: Educating the Air Leadership at Fort Leavenworth*. (Ft Leavenworth: US Army Command and General Staff College, 1997).

¹⁰ Lieutenant General Laurence S. Kuter, Official USAF Biography. (Maxwell AFB: HRA 342-82-032).

¹¹ Kuter interview, 162-163.

¹² Byrd, *Chennault*, 37; Hansell, 12.

¹³ Walker was in the ACTS class of 1929, an instructor 1929-1934, and was KIA in the Pacific, January 1943, when a Brigadier General. Walker, *Future Stars*.

¹⁴ Martha Byrd, *Kenneth N. Walker, Airpower's Untempered Crusader*. (Maxwell AFB: Air University Press, 1997), 32.

¹⁵ *Ibid.*, 25; Walker had served as one of Mitchell's aides; SAAS, *The Paths of Heaven*, 108; Lieutenant Mark A. Clodfelter, "Molding Airpower Convictions: Development and legacy of William Mitchell's Strategic Thought."

¹⁶ Wilson was in the ACTS class of 1931, an instructor 1931-1934 and 1936-1939, and retired in 1948 as a Major General. Walker, *Future Stars*.

¹⁷ Donald Wilson, "Origin of a Theory for Air Strategy," *Aerospace Historian* 18, no. 1 (March 1971): E 19; and "United States Air Corps, Bombardment Aviation, 1933-1934." (Maxwell AFB: HRA 248.101-9), 81.

¹⁸ McFarland, *To Command the Sky*, 27.

¹⁹ *Ibid.*, 27.

²⁰ *Ibid.*, 27.

²¹ Byrd, *Chennault*. Chennault was in the ACTS class of 1931, and an instructor 1931-1936..

²² Annual Report of the Chief of the Air Corps, 1938. (Maxwell AFB: HRA 167.6-53), 12.

²³ Bernard C. Nalty, *Winged Shield, Winged Sword: A History of the United States Air Force*. (Washington DC: Air Force History and Museums Program, 1997), 140-141;

Notes

Robert Futrell, *Ideas, Concepts, Doctrine: Basic Thinking in the United States Air Force 1907-1960*. (Maxwell AFB: Air University Press, 1989), 69; Air Force Maneuvers, October 1925. (Maxwell AFB: HRA 248.2122); Report of Air Corps Field Exercises, 1-24 April 1930. (Maxwell AFB: HRA 168.65043-10), 1-3.

²⁴ William C. Sherman, *Air Warfare*. (New York: The Ronald Press Company, 1926), 26.

²⁵ Maurer, Maurer, *Aviation in the U.S. Army, 1919-1939*. (Washington DC: US Government Printing Office, 1987), 62-63.

²⁶ Phillip S. Meilinger, *Hoyt S. Vandenberg: The Life of a General*. (Bloomington: Indiana University Press, 1989), 19.

²⁷ Lieutenant General Earl W. Barnes, Official USAF Biography. (Maxwell AFB: HRA 342-82-032). ACTS class of 1935.

²⁸ Lieutenant General Earle W. Barnes, interview by Hugh N. Ahman, USAF Oral History, 22-23 January 1975. (Maxwell AFB: HRA K239.0512-828), 138.

²⁹ *Ibid.*, 122.

³⁰ Lieutenant General Ira C. Eaker, Official USAF Biography. (Maxwell AFB: HRA 342-82-032). ACTS class of 1936.

³¹ Lieutenant General Ira C. Eaker, interview by Cadet Richard Tobin, USAF Oral History, March 1974. (Maxwell AFB: HRA K239.0512-918), 7-9.

³² *Ibid.*, 8-9.

³³ *Ibid.*, 9.

³⁴ Arnold, *Global Mission*, 494. General Johnson was in the ACTS class of 1939.

³⁵ General Leon W. Johnson, interview by Dr James C. Hasdorff, USAF Oral History, August 1975. (Maxwell AFB: HRA K239.0512-865), 40-42.

³⁶ *Ibid.*, 42-43.

³⁷ *Ibid.*, 37-39.

³⁸ Samuael J. Walker, *Future Stars: Educating the Air Leadership at Fort Leavenworth*. (Ft Leavenworth: US Army Command and General Staff College, 1997). General Kenney was in the ACTS class of 1926.

³⁹ General George C. Kenney, interview by Dr James C. Hasdorff, USAF Oral History, 21 August 1974. (Maxwell AFB: HRA K239.0512-806), 33.

⁴⁰ General Curtis E. LeMay, Official USAF Biography. (Maxwell AFB: HRA 342-82-032). ACTS class of 1939.

⁴¹ Dr Richard H. Kohn, *Strategic Air Warfare*. An interview with Generals Curtis E. LeMay, Leon W. Johnson, David A. Burchinal, and Jack J. Catton. (Washington DC: Office of Air Force History, 1988), 28.

⁴² General Curtis E. LeMay, *Mission With LeMay: My Story*. (Garden City, NJ: Doubleday, 1965).

⁴³ Arnold, *Global Mission*, 149.

⁴⁴ *Ibid.*, 149.

⁴⁵ Thomas M. Coffey, *HAP: The story of the US Air Force and the Man Who Built It, General Henry "Hap" Arnold*. (New York: Viking Press, 1982), 197. Arnold never attended the ACTS.

⁴⁶ Kuter interview, 117.

Notes

⁴⁷ Ibid., 109.

Chapter 5

Conclusions

Thus, almost inevitably, the thoughts of those fliers most concerned with the future of air power turned to a wholly revolutionary idea. Given proper weapons, doctrine and independence, they felt the traditional methods for waging war could be circumvented by something much less costly and much more effective than mass armies slugging it out for months on end.

—Major General Haywood S. Hansell

The Air Corps Tactical School has been generally considered the source of the Army Air Corps' strategic bombing doctrine. It can be argued, however, that, although it may have contributed to doctrinal development, the School was not where it "all began." Neither were the instructors and students at the School the only airmen who thought about doctrine during the inter-war years. As Michael Sherry writes in his book, *The Rise of American Air Power*, "the doctrine of precision bombing had origins as complex as its implications."¹

The early air power thinkers, Douhet, Trenchard, and Mitchell went beyond pure theory—they developed strategic air power doctrine as well. They applied the theories, principles and doctrines of contemporary and historical military thinkers to a new type of warfare. They were air power's first leaders and strategists—their ideas and their doctrines, were tried and tested during World War I and during the conflicts immediately preceding World War II. The Air Corps Tactical School's faculty and students most

probably helped modify their ideas in order to compensate for changing technologies, but it is possible that no truly original, or revolutionary, thoughts came from the School.

The Air Corps Tactical School may have been the “intellectual center of the Air Corps,” but “very, very few people went through [the] Tactical School.”² It is unlikely that no one outside of the School thought about air power doctrine. It appears equally unlikely, that everyone who was inside the school did. It has been suggested that the School was an “important stepping stone” in the “careers of regular military officers,” but it is important to note, that most of the senior Air Corps leaders, the men who established American air power, did not attend.³ For the future leaders that did attend the School, it appears that not all considered it a significant experience. Perhaps, the School was nothing more than a well-documented and visible representation of the Air Corps at large, its contributions no greater or smaller than those made by operational units.

The inter-war years can be characterized as a time of an isolationist and pacifist public sentiment; a time of fiscal cutbacks and depression; and a time of military insecurity. Within this context, the Air Corps and its airmen sought validation. Insufficient budgets forced them to be extremely selective in procurement. Political and military constraints required a tactful, conciliatory approach to finding a defining mission. Technology, while advancing, was still limited, and offered only limited options. “By 1935 the Air Corps had developed a body of doctrine based on one type of mission—strategic bombardment—while fully accepting and championing the air arm’s paramount importance in another—coastal defense.”⁴ A mission built around the B-17.⁵

Strategic air power doctrine already existed before the Air Corps Tactical School was established. It was formulated by the early air power thinkers, modified by Air

Corps airmen at large, and shaped by the contemporary economic, political and technological contextual elements. The Air Corps Tactical School's impact on the development of strategic air power doctrine may not have been as great as we have led ourselves to believe.

Notes

¹ Michael S. Sherry, *The Rise of American Air Power*. (New Haven: Yale University Press, 1987), 49.

² Phillip S. Meilinger, *Hoyt S. Vandenberg: The Life of a General*. (Bloomington: Indiana University Press, 1989), 16; Lieutenant General Earle W. Barnes, interview by Hugh N. Ahman, USAF Oral History, 22-23 January 1975. (Maxwell AFB: HRA K239.0512-828), 115.

³ David R. Mets, *Master of Airpower: General Carl A. Spaatz*. (Novato, CA: Presidio Press, 1988), 56.

⁴ John F. Shiner, *Foulois and the Army Air Corps, 1931-1935*. (Washington DC: Office of Air Force History, 1984), 46.

⁵ General Carl Spaatz, *Strategic Air Power: Fulfillment of a Concept*. (New York: Council on Foreign Affairs, Inc., 1946), 389.

Bibliography

- “Air Corps Tactical School: The Untold Story.” Air Command and Staff College Text, May 1995.
- Air Corps Tactical School Annual Progress Reports, 1930-40.* Maxwell AFB: HRA #K245.111.
- Air Force Course draft text, 1936-1937. Maxwell AFB: HRA #248.101-1.
- Air Force Course draft text, 1937-1938. “Air Operations—Counter Air Force.” Maxwell AFB: HRA “The Hansell Papers.”
- “Air Force Maneuvers, October 1925.” Maxwell AFB: HRA #248.2122.
- Air Warfare Course draft text, 1938-1939. Maxwell AFB: HRA #248.101-1.
- “Annual Report of the Chief of the Air Corps, 1938.” Maxwell AFB: HRA #167.6-53.
- Arnold, Henry H. *Global Mission.* New York: Harper & Brothers, 1949.
- Barnes, Earle W. Interview by Hugh N. Ahman, USAF Oral History, 22-23 January 1975. Maxwell AFB: HRA #K239.0512-828.
- Barnes, Earl W. Official USAF Biography. Maxwell AFB: HRA #342-82-032.
- Bissell, Clayton Bissell. Interview by Brigadier General George W. Goddard, USAF Oral History, 22 February 1966. Maxwell AFB: HRA #K239.0512-987.
- Bradley, Follett. “Pre-World War II Military Air Doctrines.” Air War College lecture, 26 January 1951. Maxwell AFB: HRA #239.716251-21.
- Byrd, Martha. *Kenneth N. Walker, Airpower’s Untempered Crusader.* Maxwell AFB: Air University Press, 1997.
- Byrd, Martha. *Chennault: Giving Wings to the Tiger.* Tuscaloosa: University of Alabama Press, 1987.
- Coffey, Thomas M. *HAP: The Story of the US Air Force and the Man Who Built It, General Henry “Hap” Arnold.* New York: Viking Press, 1982.
- Cooling, Benjamin Franklin. *Case Studies in the Achievement of Air Superiority.* Washington DC: Center for Air Force History, 1994.
- Craven, Wesley F. *The Army Air Forces Prior To World War II.* Maxwell AFB: Air University Press, 1949.
- Crowder, James L. *Osage General: Major General Clarence L. Tinker.* Tinker AFB: Tinker AFB Office of History, 1987.
- Douhet, Giulio. *The Command of the Air.* Washington DC: Office of Air Force History, 1983.
- Eaker, Ira C. Interview by Cadet Richard Tobin, USAF Oral History, March 1974. Maxwell AFB: HRA #K239.0512-918.
- Eaker, Ira C. “The Air Corps Tactical School,” *Air Corps Newsletter*, 15 April 1936.
- Ennels, Jerome A. *The Wisdom of Eagles, A History of Maxwell Air Force Base.* Montgomery: Black Belt Press, 1997.

- Finney, Robert T. *USAF Historical Studies: NO 100*. Maxwell AFB: Air University Press, 1955.
- Finney, Robert T. *History of the Air Corps Tactical School, 1920-1940*. Washington DC: Center for Air Force History, 1992.
- Futrell, Robert. *Ideas, Concepts, Doctrine: Basic Thinking in the United States Air Force 1907-1960*. Maxwell AFB: Air University Press, 1989.
- Greer, Thomas H. *The Development of Air Doctrine in the Army Air Arm, 1917-1941*. Maxwell AFB: Air University Press, 1955.
- Hansell, Haywood S. *The Air Plan That Defeated Hitler*. Atlanta: Higgins-McArthur/Longino & Porter, Inc., 1972.
- Head, William P. *Every Inch a Soldier: Augustine Warner Robins and The Building of US Airpower*. College Station: Texas A&M University Press, 1995.
- Hurley, Alfred Francis. *The Aeronautical Ideas of General William Mitchell*. Princeton University, Ph.D., 1961.
- Johnson, Leon W. Interview by Dr James C. Hasdorff, USAF Oral History, August 1975. Maxwell AFB: HRA #K239.0512-865.
- Kenney, George C. Interview by Dr James C. Hasdorff, USAF Oral History, 21 August 1974. Maxwell AFB: HRA #K239.0512-806.
- Kohn, Dr Richard H. *Strategic Air Warfare*. Washington DC: Office of Air Force History, 1988.
- Kuter, Laurence S. Kuter. Official USAF Biography. Maxwell AFB: HRA #342-82-032.
- Kuter, Lawrence S. Interview by Hugh N. Ahmann and Tom Sturm, 30 Sep—3 Oct 1974, USAF Oral History. Maxwell AFB: HRA #K239.0512-810.
- LeMay, Curtis E. *Mission With LeMay: My Story*. Garden City, NJ: Doubleday, 1965.
- LeMay, Curtis E. Official USAF Biography. Maxwell AFB: HRA 342-82-032.
- Maurer, Maurer. *Aviation in the U.S. Army, 1919-1939*. Washington DC: US Government Printing Office, 1987.
- McFarland, Stephen Lee. *To Command the Sky: The Battle for Air Superiority Over Germany, 1942-1944*. Washington DC: Smithsonian history of aviation series, 1991.
- Meilinger, Phillip S. *Hoyt S. Vandenberg: The Life of a General*. Bloomington: Indiana University Press, 1989.
- Mets, David R. *Master of Airpower: General Carl A. Spaatz*. Novato, CA: Presidio Press, 1988.
- Mitchell, William. “Notes on the multi-motored bombardment group, day and night.” Reproduced from a typewritten copy, 1923.
- Mitchell, William. *Winged Defense; The Development and Possibilities of Modern Air Power—Economic and Military*. New York, London: G.P. Putnam’s sons, 1925.
- Mooney, Chase C. *Organization of Military Aeronautics, 1907-1935*. Maxwell AFB: AAF Historical Study, 1944.
- Morrow, John H. Jr. *The Great War in the Air: Military Aviation From 1909-1921*. Washington DC: Smithsonian Institution Press, 1993.
- Nalty, Bernard C. *Winged Shield, Winged Sword: A History of the United States Air Force*. Washington DC: Air Force History and Museums Program, 1997.
- Partridge, Earle E. Official USAF Biography. Maxwell AFB: HRA #342-82-032.

- Partridge, Earl E. Interview by LtCol Collins, 12 April 1968, USAF Oral History. Maxwell AFB: #K239.0512-919.
- Peabody, Hume. Air Force Course, 1931-1932, instructor notes. Maxwell AFB: HRA #K248.2013A.
- “Report of Air Corps Field Exercises, 1-24 April 1930.” Maxwell AFB: HRA #168.65043-10.
- School for Advanced Aerospace Studies. *The Paths of Heaven: The Evolution of Air Power Theory*. Maxwell AFB: Air University Press, 1997.
- Sherman, William C. *Air Warfare*. New York: The Ronald Press Company, 1926.
- Sherry, Michael S. *The Rise of American Air Power*. New Haven: Yale University Press, 1987.
- Shiner, John F. *Foulois and the Army Air Corps, 1931-1935*. Washington DC: Office of Air Force History, 1984.
- Smith, Dale O. *U.S. Military Doctrine, a Study and Appraisal*. New York: Duell, Sloan and Pearce, 1955.
- Spaatz, Carl. Official USAF Biography. Maxwell AFB: HRA #342-82-032.
- Spaatz, Carl. *Strategic Air Power: Fulfillment of a Concept*. New York: Council on Foreign Affairs, Inc., 1946.
- Vandenberg, Hoyt S. Official USAF Biography. Maxwell AFB: HRA #342-82-032.
- Walker, Samuael J. *Future Stars: Educating the Air Leadership at Fort Leavenworth*. Ft Leavenworth: US Army Command and General Staff College, 1997.
- Wilson, Donald. “Origin of a Theory for Air Strategy,” *Aerospace Historian* 18, no. 1, March 1971.
- Wilson, Donald. “United States Air Corps, Bombardment Aviation, 1933-1934.” Maxwell AFB: HRA #248.101-9.