

In the beginning, intrepid airmen set out to define the shape and substance of airpower.

The Tactical School

By Walter J. Boyne

IN THE years between the world wars, Army leadership expected the Air Corps Tactical School to produce air officers trained in the use of airpower to support ground troops. The airmen at ACTS, instead, developed a doctrine that envisioned strategic bombing to paralyze an enemy's industrial infrastructure and thus eliminate his war-making capacity.

It was not a readily accepted doctrine.

Most senior military leaders of the time agreed with retired Gen. of the Armies John J. Pershing, who had said: "An air force acting independently can of its own account neither win a war at the present time nor, so far as we can tell, at any time in the future. ... The military air force must be controlled in the same way, understand the same discipline, and act in accordance with the Army commander under precisely the same conditions as the other combat arms."

The airmen at the tactical school were dedicated to proving Pershing wrong.

Army Air Service leaders after World War I recognized that they needed to create a formal process to teach air tactics and develop principles of airpower. In February 1920, they authorized creation of the Air Service School at Langley Field, Va., and tasked Maj. Thomas DeWitt Milling to set it up.

The school's primary mission was simple: Teach air officers and se-

lected officers from other services the strategy, tactics, and techniques of airpower. Its secondary mission—perhaps more critical than the first—was to develop doctrine for the new service. At that point, airpower doctrine, as such, did not exist.

Most of the school's early ideas on the use of airpower were derived from the thinking of Brig. Gen. William "Billy" Mitchell, with just a dash of the thought of Giulio Douhet thrown in. Mitchell championed an independent air force and the primacy of the bomber. It became impolitic to endorse his views openly after his court-martial in 1925 for speaking out against the control of aviation by nonflying officers and claiming their policies were responsible for a rash of air vehicle crashes.

Nonetheless, Milling injected Mitchell's ideas in the school's philosophy. He had been Mitchell's protégé and chief of staff during the war and believed in his ideas.

Mitchell-flavored thinking was in direct conflict with the official view of the War Department General Staff. Senior Army leaders still thought of aviation in terms of observation and attack, with scant emphasis on pursuit and almost none on bombing. All attempts—and there were many—to express the school's views in the form of regulations or field manuals were promptly squelched by the General Staff.

In the hot competition for the lim-

ited military budgets of the time, neither the Army nor the Navy wanted to give up roles and missions upon which their appropriations depended. It was more comfortable to regard the Air Service as just another Army combat arm, rather than as an independent, equal service. On this latter point, the Navy was even more adamant than the Army, for Navy leaders were convinced that an independent air force would always side with the Army in any dispute.

In its early days, the views of the school conflicted with those of top Air Service officials, who criticized the school's policies for being too conservative. A paper titled "The Doctrine of the Air Force," prepared by the faculty and submitted in 1928, was regarded as placing airpower in a subordinate role and not considering fully airpower's possible ability to overcome enemy opposition at the outset of a war.

In the Beginning

When it opened its doors in 1920, the Air Service School had nine instructors and eight students. There were no texts or doctrine, and instruction was based on the experience gained during World War I. A year later, the Air Service changed the school's name to Air Service Field Officers' School to reflect its role in providing professional education for the service's more senior officers—those destined for future leadership roles. However, its utility as a school for field grade officers only was limited by the slow tempo of Air Service promotions to field grade status. It seemed probable that there would always be more company than field grade officers.

In November 1922, the service changed the school's name to the Air Service Tactical School. With the redesignation came a considerably enlarged and broadened curriculum, one that included coverage of tactics of the other services. The school's first text was written by Maj. William C. Sherman, Milling's assistant and another Mitchell disciple, and issued in 1921 in the form of a mimeographed training regulation. It was soon supplemented by more formal texts derived from lectures.

The school's nine-month curriculum included 1,345 hours of instructions on 20 different subjects and 126 hours of practical flying. Even non-



In 1922, the school's name changed from Air Service Field Officers' School to the Air Service Tactical School. This photo shows the school's student barracks, built in 1924.

rated officers from other services were placed on flying status for the course.

In 1926, when Congress redesignated the Air Service as the Army Air Corps, the school's name changed again, to the Air Corps Tactical School.

For the first five years of the school, instructors focused their lectures on the lessons learned from World War I. By 1928, however, the school began to adopt a forward look, with some lectures considering "what if" scenarios that investigated how more innovative use of airpower might have affected World War I battles.

Soon, the school was investigating ways airpower might influence future combat. By 1929, the switch from reviewing the past to planning for the future had become so ingrained in school thinking that it adopted this motto: *Proficimus More Irretenti*, meaning "We Make Progress Unhindered by Custom."

The tactical school remained at Langley until 1931. In that year an Air Corps expansion brought new units to Langley, prompting officials to move the school to Maxwell Field near Montgomery, Ala. The Montgomery community welcomed the school, and Congress proved to be unusually generous in providing funds for construction.

The "Bomber Mafia"

By the time of the move to Maxwell, the creation of doctrine had become the official goal of the vast majority of staff and students. There

grew up a small circle of brilliant leaders whose names would figure prominently in the history of the service and who would retrospectively be called the "bomber mafia." They included many important future general officers, including Muir S. Fairchild, Harold Lee George, Haywood S. Hansell Jr., Laurence S. Kuter, Robert Olds, Kenneth N. Walker, Robert M. Webster, and Donald Wilson. Inspired by Mitchell's ideas and vision, their beliefs were reinforced by the anticipation of modern equipment that would replace the service's antiquated Keystone and Curtiss biplane bombers.

The bomber mafia believed that airpower would perhaps be the deciding factor in future wars. Reflecting Mitchell's influence, they saw airpower not as a new weapon but as a new service, one that should be equal to the Army and the Navy.

The difficulty, of course, was that such equality could not be obtained unless the Air Corps could alter its role within the Army. The Air Corps had to separate the Army's tactical objectives from strategic objectives. While it continued to furnish the Army observation and attack services, it needed to establish a long-range bomber capability. It also had to wrest away from the Navy one of its most cherished missions: The Air Corps needed to take over the role of hemispheric defense.

Air Corps proponents felt that it would be given equal status if the

public and Congress believed the Air Corps could defend American coastlines from enemy attack more effectively and more economically than the Army or the Navy. Yet for the bomber mafia, gaining the hemispheric defense mission was almost a ruse. Their goal was to create a long-range air force with the capability to attack and defeat an enemy by bombing its homeland.

This concept, so reflective of Mitchell's thought, became the guiding light of the tactical school. It was brought to fruition by members of the bomber mafia during the last 10 years of the school's existence.

The Necessary Advances

Providing substance for the bombardment concept were three advanced aircraft, introduced between 1931 and 1935. The first was the Y1B-9 unveiled in 1931. The twin-engine all-metal bomber boasted a cantilever wing and retractable landing gear, but it still had open cockpits for its crew. With a maximum speed of 186 mph, the new bomber was almost as fast as the standard P-12E fighter. The year 1932 saw the appearance of the second new item, the B-10, which later added a radically new element of equipment—the Norden Mark XV bombsight. This combination of high altitude capability and bombing accuracy gave wings to the planning of the bomber mafia.



The B-9 bomber (shown here with a P-26) was the first of several advanced aircraft introduced in the 1930s. The twin-engine, all-metal bomber featured retractable landing gear, cantilevered wings, and a top speed of 186 mph.

Experience in field maneuvers led some to the belief that the speeds and altitudes now achieved by bombers made them impervious to interception.

The third new aircraft was the B-17, first flown in 1935 and destined to become the backbone of the bomber force in World War II. As retired Gen. of the Air Force, Henry H. "Hap" Arnold would later call the first test batch of YB-17s the "first real American airpower." For those at the tactical school, the effect of the B-17 was intoxicating, for it seemed to the ACTS planners that

they had, at last, a war winning weapon, one that would prove Pershing wrong.

The bomber mafia's doctrine—known as the "industrial web theory"—centered on use of high altitude, daylight, precision bombing of an enemy's industrial infrastructure. This type of bombing mission, they said, would not require fighter escort—an important claim, given that there were at the time no fighters with the necessary range.

Their view had at least one critic—Capt. Claire L. Chennault, the chief advocate of fighter aircraft at the tactical school. Chennault, who later would lead the legendary Flying Tigers in China, believed that unescorted bombers would become extremely vulnerable should the enemy combine a central fighter control system and technologically advanced fighters. In an extreme step, Chennault challenged a bomber-friendly report by then-Lt. Col. Hap Arnold. Arnold's report claimed that P-26 fighters could not intercept bombers during recent West Coast maneuvers.

Airspeeds had become so great, Arnold reported, that pursuit attacks were no longer feasible. In a rejoinder to Air Corps leaders, Chennault charged that the analysis was biased against fighters and that Arnold failed to draw the proper conclusions about improvements required for pursuit aviation. The letter probably contributed to their icy relations during World War II.



Then-Lt. Col. Henry H. "Hap" Arnold sits on the wing of a B-10. The B-10, which entered service in 1932, provided the high altitude capability and bombing accuracy needed by "industrial web theory" proponents.

Arnold and the bomber mafia prevailed. Because resources remained limited, the Air Corps shelved not only the acquisition of modern pursuit aircraft but also the whole concept of obtaining air superiority.

The Golden Egg

The high altitude, daylight, precision bombing approach and the industrial web theory formed the basic theoretical concept Air Corps leaders needed in their fight to establish an independent air force. It was a mechanism under which airpower could vanquish any potential enemy. This doctrine had no basis in practical experience, but depended on the inductive reasoning of the bright minds at the school.

The school's major thinkers, including Olds, Walker, and Wilson, believed that a modern nation's ability to supply its armed forces could be disrupted by massed air strikes on critical points within the system. These key nodes included railroads, petroleum refineries, electrical power systems, and water supply systems. The destruction of these and other elements of infrastructure would destroy the enemy's will and capability to fight.

Under this philosophy, air superiority would be achieved through the destruction of enemy capability rather than through combat attrition. It held that the number of losses that enemy fighters might inflict on bombers would not be decisive.

This new doctrine, developed by so many brilliant minds and believed in so fervently by so many, was proved to be dead wrong during the first years of US participation in World War II. Enemy fighters could and did inflict unsustainable losses.

The new doctrine could become effective only when the US at last established air superiority in early 1944 with large numbers of P-51 Mustangs. Once air superiority was established, bombing could take place almost, but not quite, as the bomber mafia had theorized.

The philosophy had a side benefit.



After World War II, Army Air Forces leaders recognized the need to continue the tactical school tradition, so created Air University at Maxwell Field, Ala.

It led directly to the creation of a bomber force so huge that, once the Allies had achieved air superiority, it could readily smash Germany and Japan.

However, there is no denying that the school downplayed the need to establish air superiority and thus helped delay development of a long-range escort fighter. And the school's bomber proponent erred in other ways. They overestimated the navigational and bombing capability of heavy bombers and the destructive ability of their bombs. They did not sufficiently consider the effects of weather, which was so often bad over Europe and characterized by storms and jet streams over Japan. Compounding the problem was the fact that they did not foresee the development of radar, with all the advantages that it conferred upon the defense.

Some leading bomber proponents would end up in the Air War Plans Division. President Roosevelt, anticipating US entry into World War II, asked the Army and Navy in July 1941 for an estimate of the production that would be required to defeat the Axis. Arnold, now the Army Air Forces Chief, got permission to

have his new Air War Plans Division prepare the air portion of this study. George, Hansell, Kuter, and Walker distilled seven years of tactical school thinking into what became known as Air War Planning Document 1, or AWPDP-1.

AWPDP-1 asserted that the Army Air Forces would require 251 combat groups, 105,467 aircraft, and 2,164,916 airmen to win the war. Had they submitted this estimate a year earlier, the ACTS alumni probably would have been thought insane. Yet in August 1941, AWPDP-1 was immediately, almost automatically, accepted as the basis for planning the wartime air campaign.

By then, the tactical school had ceased operations. Faced with the nation's imminent entry into World War II, the Air Corps suspended instruction at the school on June 30, 1940. During its 20 years of operation, it produced 1,091 officer graduates. Out of that group came 261 of the 320 Army Air Forces general officers who were on duty at the end of World War II. On March 12, 1946, the AAF established Air University to carry on the tradition of the tactical school as a center for progressive thinking and development of doctrine.

The doctrine forged at the tactical school was flawed and required alteration, but it provided a solid basis for the development of modern airpower theory. ■

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