Irascible, opinionated, and underappreciated, Chennault was the champion of innovative fighter tactics.

Flying Tiger, Hidden Dragon

By Rebecca Grant

EN. Claire Lee Chennault died nearly 44 years ago, but even now, he is still a famous man, widely renowned as the glamorous leader of the World War II "Flying Tigers." Chennault's heroics against Japanese forces in the Far

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Chennault, pictured here as a major general, wore not only US wings but also those of the Chinese air force.

East made him an enduring legend. When he died in 1958, the *New York Times* put his obituary on Page One.

Famous? Yes. But highly regarded as an airpower thinker? Surprisingly, no.

Chennault today rates only occasional mention in books and studies on the evolution of airpower. His status as an innovator does not compare with that of Mitchell, Arnold, or Doolittle. The image of Chennault rests mainly on his long-ago operational exploits, not his long-term contribution to airpower or the Air Force.

Chennault was an outsider in the service. Early in his career, he challenged the strategic airpower doctrine of the Air Corps Tactical School, creating more than a few enemies. His sensational postwar memoirs only poured salt into wounds opened during that clash. The bitterness lingers.

Decades after that political battle, doctrine guru I.B. Holley Jr. continued to slam Chennault as one whose "shoddy thinking and self-serving retrospective distortions muddied the doctrinal picture." Holley declared his regrets that Air University had given the Flying Tiger a prominent memorial.

Today, AU's summary biography calls Chennault's ideas on airpower "not sound." It laments, "He has been the subject of a number of biographies—probably more than he deserves."

For others, however, Chennault is revered as a man of great sub-

stance, one whose headstrong pursuit of proper fighter tactics and refusal to be swept up in bomber theories of the 1930s made him more than a Hollywood hero. These analysts say that, from his days at the Tactical School in the early 1930s to his actions in the China– Burma–India theater and afterward, Chennault stood out for his grasp of how to win air supremacy in harsh conditions.

For supporters, the American Volunteer Group is Exhibit A. During its brief, one-year existence, Chennault's AVG—the Flying Tigers outflew and outfoxed far more experienced Japanese pilots. It fought a highly mobile air battle over Burma and much of China. It tallied a 15-to-1 kill ratio.

Chennault's true achievement stemmed from his intuitive grasp of fighter tactics and his successes in defensive air wars in the neglected China–Burma–India theater. It is a record of achievement matched by few others.

The Tactician

Chennault was born in 1890 in Commerce, Tex. As a young man, he taught school in Louisiana. Then came World War I, and he left teaching for good to take an Army officer commission in the Infantry Reserve in November 1917.

He soon transferred to the aviation section of the Army Signal Reserve Corps and served in the war. The Army rejected his request for flight training four times before finally granting approval after the Armistice. Chennault learned to fly the Curtiss Jenny at Kelly Field in San Antonio, where he was awarded the rating of "fighter pilot" in 1919.

Chennault was honorably discharged from the Reserve in 1920, but within three months, he was back in the Army with a regular commission and serving in various flying capacities. Before long he was commanding a squadron in Hawaii. In due course, Chennault attended the Air Corps Tactical School at Langley Field, Va., where he stayed on after graduation as the senior instructor in pursuit tactics.

Chennault made good use of his five years at ACTS. He dedicated himself to modernizing the concept of fighter tactics at a time when mainstream thinking among his peers favored bombers.

Chennault certainly was not "antibomber." Far from it; his views about the strategic application of airpower paralleled Mitchell's writings. Col. Peter R. Faber, an officer on today's Air Staff who has studied and written about Chennault's career, called his beliefs "indistinguishable from those of a typical Douhet–quoting strategic bombing advocate of the 1930s."

In a 1933 article for the Army's *Coast Artillery Journal*, Chennault said, "The aerial weapon can be applied directly to the national resistance of the enemy's population, as well as to his means of resistance, before surface forces gain contact and after surface forces attain a static condition."

What drove a wedge between Chennault and his peers was not differences over the value of bombers but Chennault's passionate belief that fighters could effectively handle hostile aircraft, whether they were incoming enemy bombers or enemy fighters threatening America's own bombers.

Chennault was influenced by his personal study of World War I operations. He rapidly absorbed the overriding airpower lesson of the Great War: Air supremacy was essential for all operations. Only pursuit aircraft trained to "destroy hostile enemy aircraft" could win air supremacy, he concluded.

In Chennault's view, "no new aero-

nautical development or invention" since the Great War had changed that fact. Chennault said the next war would start with a battle for air supremacy, and pursuit aviation would be the most useful tool in the opening phases. He held firm on this belief even as others shifted to the notion that bomber assaults on cities would dominate the war.

Tired Tactics

Chennault, for all his interest in the Great War, had no intention of flying like a World War I American pursuit pilot. On arrival at ACTS, he was dismayed to find that pursuit instructor Clayton Bissell still taught the dawn patrol and fighter sweep tactics of 1918.

Chennault's prime interest lay in building on German air tactics developed in the middle of the war by German ace Oswald Boelcke. He was impressed with Boelcke's pioneering discovery: "Two planes could be maneuvered to fight together as a team." Chennault thereafter spurned all tactics of individual dogfight pilots seeking kills at the expense of tactical success for the whole formation.

Chennault left an impression—for many, a negative one—through his harassment of the Navy and coast artillery in Hawaii. He once led his squadron in a formation Immelmann to climb out and get on the tail of a group of Navy dive bombers. Another day, the squadron flew mock



Generals Chennault (center) and Bissell (right) meet with Col. Robert Scott, one of Chennault's commanders, at Kunming airfield, China, in 1942.

dive-bombing and strafing runs against coast artillery units practicing on the beach. No one had notified the artillerymen that the raid was an exercise.

He goaded his pilots into flying formation aerobatics to give them a tactical edge. By emphasizing basic fighter maneuvers, Chennault trained his pilots to learn the maximum capabilities of their airplanes, compensate for weaknesses, and use all advantages.

Technically, Chennault was on solid ground, but advances in bomber design were about to change matters dramatically.



Chennault (center), in the "Trapeze" days, is pictured here with two members of that aerobatic team, William MacDonald (left) and John Williamson. All three would go on to become aviation advisors to Chiang Kai-shek.

"As far as Chennault was concerned, pursuit aviation had the technical capability to neutralize strategic bombardment," said Faber.

The task, then, was to update pursuit tactics, which just happened to be part of Chennault's job. From his arrival in 1930 at ACTS through 1935, Chennault carried out, taught, and wrote on fighter tactics and the general requirements for "air force."

Chennault got permission to form an ACTS aerobatic team, which he dubbed "Three Men on a Flying Trapeze." The trio was a laboratory for fighter tactics as well as a way to titillate the public. Spectators at air shows across the South saw three airplanes performing loops, spins, and chandelles in synchronization.

Tactically, some of the moves were startling and of little use for real combat. Such was the case with one that Chennault described as "a squirrel-cage effect in which each plane rolled around the other while doing an individual barrel roll."

However, Chennault's passion for stunt flying was all part of a deep belief that fighter tactics had to move toward greater concentration of force to keep control of the air in the next war. He later wrote that the Trapeze act proved Boelcke's theory that "fighters could battle together through the most violent maneuvers of combat."

In other words, air supremacy began with the flight lead.

He noted, too, that pilots experi-



Hap Arnold (left) met with Chennault and American and British officers at a Flying Tiger base during a trip to China.

enced at flying together "need not follow an inflexible rule as to relative positions in formation in order to get effective results."

Pursuit Advocate

From his obsession with fighter tactics emerged a violent opposition to the increasing emphasis placed on the new notion of operating bombers alone. Chennault entered the debate as pursuit aviation was going downhill. Doctrine published in 1923 had made protection of bombers a cardinal role for pursuit aircraft. In the 1930s, ACTS put out a text on bombardment that ignored the idea of fighter escort altogether.

Chennault did not dispute the need for bombers. He flew them often in Hawaii and wrote in his memoirs that "bombardment is, of course, the sledgehammer of airpower." His journal articles from the early 1930s discussed bomber support. In China, he once pined for a dozen bombers to knock out Japanese supply ships after an aerial reconnaissance photo showed them massed in Bangkok harbor in Thailand.

However, Chennault's enthusiasm stopped well short of infatuation. Historian Robert F. Futrell notes that Chennault was one of the few airmen of the day who refused to accept the concept of "bombardment invincibility."

The nub of Chennault's argument was that bombers could indeed be successfully intercepted and shot down by fighters and that this made fighters the cornerstone of an airpower force. He conceded that there was "circumstantial" evidence in favor of the bombers; the 235 mph B-10 was slightly faster than the 225 mph P-26 fighter. However, he concluded that fighters would prevail in actual combat operations.

In coming to this conclusion, Chennault saw through many exercises of the late 1920s and early 1930s in which conditions—and sometimes the rules—were rigged to favor bombers.

Take, for example, 1931 Air Corps maneuvers in Ohio. The pursuit commander failed to intercept any bombers in two weeks of action. The major general in charge concluded, "Due to increased speeds and limitless space, it is impossible for fighters to intercept bombers and therefore it is inconsistent with the employment of air force to develop fighters."

Chennault had a different explanation: The pursuit commander improperly employed his fighters.

Key Innovation

One of Chennault's key insights was to sense the need for early warning nets to track hostile aircraft and give fighters the data and time needed to intercept them. The "biggest problem of modern fighters was intelligence," Chennault wrote of this era. "Without a continuous stream of accurate information keeping the fighters posted on exactly where the highspeed bombers were, attempts at interception were like hunting needles in a limitless haystack."

His handwritten notes for an April 1933 lecture stated, "In the future, an organization must be provided so that pursuit can operate upon accurate information against definite targets."

This timeless observation set Chennault apart from other "pure" airpower tacticians. Something in his studies of World War I, his conclusions from wargames, and his own experiences had provided a basis for a brilliant piece of innovation.

Later in 1933, more air exercises were held, and Chennault helped



Great leaps in bomber design swayed many but not Chennault. He insisted that even the massive B-15, shown here with a P-26, needed a fighter escort.

prepare a warning net comprising 69 posts covering 16,000 square miles, all reporting by telephone and radio to the pursuit operations center. Fighters sent from Louisville, Ky., intercepted and "attacked" bombers flying from Dayton, Ohio, to Ft. Knox, Ky.

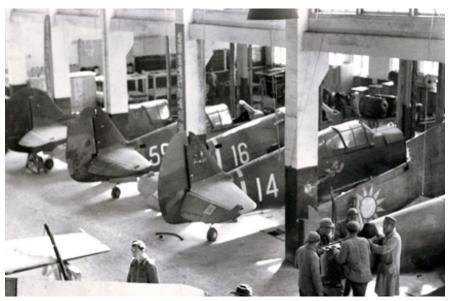
Ft. Knox was a decisive event, and Chennault lost respect for any who did not grasp its meaning. It reinvigorated his work and soon Chennault became an abrasive advocate for pursuit. He laid into the "bomber generals," Douhet, and eventually, fellow faculty members such as Haywood S. Hansell Jr. (ironically, an original Trapeze member), Harold L. George, Kenneth N. Walker, and Laurence S. Kuter. These airmen, Chennault charged, "preached the bombardment gospel according to Douhet and considered fighters [to be] in the same dodo category as sausage balloons."

Chennault even quarreled with those who supported his basic claim that bombers needed fighter escorts. He insisted that fighter aircraft should not be forced to stick predictably at the side of bombers—the orthodox view—but rather be allowed to range far ahead and destroy enemy aircraft.

Time proved Chennault right. He neither forgot nor forgave those airmen who had given short shrift to pursuit aviation.

In his memoir, *Way of a Fighter*, he blamed the bomber radicals for the "deaths of thousands of American boys who had been indoctrinated with the absolutely false theory that a bomber needs no protection from hostile fighters." He specifically blasted George, Walker, and Hansell for their work on air war plans. As Chennault charged, "Many a B-17 crew had to go down in flames under the gun and rockets of Luftwaffe fighters."

He pointed out that Walker was killed in an unescorted B-17 over Rabaul, Papua New Guinea, and that Hansell once lost five of the six B-17s in a formation attacking St. Nazaire, France. "When the P-51s finally escorted B-17s all the way to Berlin," Chennault jabbed, "the original AAF planners must have been almost as amazed as Hermann Goering"—the head of the German Luftwaffe.



China dedicated factory space for the rebuilding of Curtiss P-40s for the Flying Tigers. Similar aid was extended to Fourteenth Air Force.

In World War II, fighters were critical from the start, and US forces suffered for entering the war with second-tier fighters that demanded every drop of a pilot's skill. Chennault was exposed to the same air exercises and school debates as his colleagues. Yet he managed through his practical focus on tactics and his unwavering belief in air supremacy to chart a straighter course through the technological and doctrinal perils of interwar airpower.

His 1930–35 work had contributed much to airpower development. However, after Chennault retired in 1937 for medical and personal reasons, he got the chance to prove himself as a commander by putting his ideas to the test of combat.

Chennault in China

From 1937 through 1945, Chennault's focus was keeping some level of air supremacy over China. He hired on first as a pursuit tactics teacher for China's small new air force and as an air policy advisor to Generalissimo and Madame Chiang Kai-shek. At Chiang's suggestion, he persuaded President Roosevelt in 1941 to back a group of American volunteers. Chennault later rejoined the Army Air Forces as a general in charge of the guerilla air warfare of Fourteenth Air Force.

The American Volunteer Group idea came from Chiang's frustration with the Chinese air force's inability to defend his cities and from Chennault's itch to take advantage of weak spots in Japanese tactics. At first Chennault thought it wouldn't work. But after spending several months in Washington, the American worked out a plan for a whole new air war in China. Chennault's original idea for the AVG was to use skilled tactics to inflict on Japanese air formations losses heavy enough "to cripple their entire China bombing program." A Chinese air-warning net would give his fighters time to shift forces to meet the threat wherever it developed. "The American fighter group would function as a highly mobile aerial fire department, with the added advantage of knowing in advance where the next blaze would flare," he wrote.

In late 1940, Chennault, Madame Chiang, and her brother, the influential Chinese financier T.V. Soong, charmed Secretary of State Cordell Hull, Treasury Secretary Henry Morgenthau Jr., and Navy Secretary Frank Knox into making one part of the plan become reality. Chennault would get his fighter group. Enthusiasm in the Cabinet trumped opposition from Hap Arnold and Navy air baron Adm. Jack Towers. Roosevelt swung his support behind the group and by early January 1941, Chennault had a deal to acquire 100 British P-40s and man them with pilots and maintenance personnel recruited from the Army and Navy.

The volunteers signed on for a one-year contract at triple pay, plus the bait of \$500 extra for every Japa-



Conditions for the Flying Tigers were spartan and resources were scarce. Above, P-40s cocked and ready to go from a typical Chinese airstrip.

nese airplane a pilot destroyed. Roosevelt and Knox gave the group's transport ship an escort of two Navy cruisers to see them across the Pacific.

Chennault's Way

Chennault ran the AVG his way. He abandoned rigid military discipline for his group of 300—pilots and ground crew. On the ground, they set rules and meted out punishments by group vote. He told his volunteers a fighter pilot "needs to have complete belief in himself and in his ability to handle anything that walks, swims, flies, or wears skirts."

In the air, Chennault was teacher, coach, and dictator. "Their flying records were not impressive," he said of his 110 pilot recruits. They ranged in age from 21 to 43, and only a dozen met Chennault's preferred requirements for experience and familiarity with the P-40. Chennault gave them each 72 hours of classroom lectures on flying and fighter tactics, beginning each morning at 6 a.m. After "kindergarten," pilots flew and flew, logging not less than 60 hours of air instruction.

Chennault gave them "a running commentary" over the radio while his secretary took notes for the critique session after every dogfight. When long landings in the "hot" P-40 caused problems, Chennault drew a line one-third of the way down the runway and fined pilots \$50 if their wheels touched down beyond it.

Most of all, Chennault shared with

off, and re-engage, tactics that kept AVG losses low.

With Chinese (and British) forces in a losing struggle, the AVG's role was mainly to deny Japan complete air superiority and disrupt and destroy their air operations whenever possible. Chennault's tactics pitted surprise and opportunity against the rigid air discipline of the Japanese in order to disrupt and harass their numerically superior formations.

Hit Hard, Break Clean

The AVG won its worldwide fame in the defense of Rangoon, Burma, from December 1941 to late February 1942. During the peak of the action, Chennault kept two of the three AVG squadrons in China and rotated one to Rangoon to help the



Flying Tigers pose for a wartime photo. Standing are Tom Haywood (left) and Arvid Olson. Sitting (left to right) are R.T. Smith, Ken Jernstedt, Robert Prescott, C.H. Laughlin, and William Reed.

them what he had learned about Japanese fighter tactics. Speed and diving power were the key. Chennault did not want the less agile but rugged P-40s trying to turn with the Japanese airplanes or getting into a tail-chase dogfight that the Americans would surely lose. "Close your range, fire, and dive away," he ordered.

RAF units in Burma scoffed at these tactics. In response, Chennault maintained that British training was "excellent against German and Italian equipment but suicide against the [aerobatic Japanese]." The P-40 pilots were taught to engage, break British as Burma began to fall to Japan. He told his pilots, "Fight in pairs. Make every bullet count. Never try to get all the Japanese in one pass. Hit hard, break clean, and get position for another pass. Never worry about what's going to happen next, or it will happen to you. Keep looking around. You can lick the Japanese without getting hurt if you use your heads and are careful."

In the final battles of late February 1942, the Rangoon AVG squadron dwindled from nine to six operational aircraft, fighting each day, before the last airplanes and a transport pulled back to China. In 10 weeks, the AVG had between five and 20 airplanes serviceable each day. They met 31 separate Japanese raids, which often numbered 100 or more aircraft, and bagged 217 enemy airplanes with 43 probables, with a loss of 16 P-40s and five pilots. In comparison, the RAF tallied 74 kills, 33 probables, and 22 aircraft lost in the battles. Chennault's switch in tactics and intensity of training paid off for his pilots.

The AVG's other remarkable achievement was fighting a defensive air war on a shoestring. Chennault's organizations were the ultimate in bare-base operations. He was proud of it and later wrote, "It was this ability to shift my combat operations 650 miles in an afternoon and 1,000 miles in 24 hours that kept the Japanese off balance for four bloody years and prevented them from landing a counterpunch with their numerically superior strength that might easily have put my always meager forces out of business."

The AVG suffered constantly from lack of supplies and was saved only by outstanding maintenance personnel who could put their P-40s back in the air. Conditions took their toll. By the spring of 1942, the pilots were in near revolt at being asked to fly low-level missions with little hope of supplies and parts to enable them to have a real impact. Combat fatigue was also a factor. With America now in the war, Washington recognized the need for a broader air effort in the China–Burma–India theater and saw the AVG as the core.

Festering Problem

The AVG officially merged into the Army Air Forces on July 4, 1942. Chennault himself had tried several times from 1938 to 1940 to return to active duty, but each time, either the Air Corps did not want him or he did not want their terms. The return to the Army was the right thing overall, but the specifics created a "festering problem that threatened to deprive China of her only effective air defense," Chennault complained.



After years of cobbling together a nearly miraculous set of victories under hard conditions, the AVG in 1942 officially merged into the AAF. However, it remained under the leadership of Chennault.

Ultimately, Chennault stayed in charge as a brigadier general but was outranked by his hated former instructor Clayton Bissell. Chennault was furious when Bissell came to China in March 1942 to arrange landing sites for the Doolittle Raiders and failed to tell Chennault about it. Chennault maintained that with the extensive Chinese early warning system, more of the Doolittle Raiders could have been talked down on friendly fields, if only he had been allowed to help.

The AVG was a tremendous morale boost and proof that the Japanese could be beaten in the air. Roosevelt's willingness to back Chennault strengthened ties with the other key member of the Big Four. "We didn't come over here for patriotic reasons," wrote Frank Schiel, one of the volunteers, "but it worked out that we did our country a great service."

Chennault's service was not over. He continued as Fourteenth Air Force commander and kept up his skill at fighting the defensive guerilla air war. He helped keep supply lines open and fought a long delaying action against a major Japanese drive

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Chennault's difficult relationship with his commander, Gen. Joseph W. Stilwell, was so well-known that it was covered in *Time* magazine. He got along much better with Stilwell's replacement, Maj. Gen. Albert C. Wedemeyer, but could not overcome the continuing friction with his AAF superiors. Chennault had hoped to see the end of the war but was replaced in his command and resigned his commission shortly before V-J Day.

For all the difficulties, Chennault's wartime command set him apart as one of few American airmen to successfully run a defensive air operation over vast territory. In later years, Chennault remained a strong supporter of Nationalist China and of the Generalissimo and, especially, Madame Chiang. He helped found an air transport service that later became the CIA's Air America and of course, his AVG band launched the Flying Tiger freight airlines. Until his death, he spoke out on the need for support to Free China and he frequently criticized US foreign policies in the East. Chennault was irascible and opinionated to the end, but his skill as an innovator and his achievements in war made him one of the true visionaries of American airpower.