THE MAGAZINE OF THE GEORGE C. MARSHALL FOUNDATION

MARSHALL

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MARSHALL

Features

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Telephone: 540-463-7103
Website: www.marshallfoundation.org

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Contact: Rick Drake at
edrake@marshallfoundation.org

Contributors: Rob Havers, Rick Drake, Cara Cook Sonnier, Dik Daso, David Sherman, Edward G. Lengel, Kelly Nye and Kevin Remington

Departments

Front cover image: General George C. Marshall leads a parade of stars such as Paul Revere, Robert E. Peary, William A. Bishop, Davy Crockett, Lewis and Clark and John Paul Jones to grace the first cover of World Famous Heroes Magazine, published in 1941. (from the George C. Marshall Research Library)

welcome

It is my great pleasure to welcome you to the spring 2017 edition of *MARSHALL*, the magazine of the George C. Marshall Foundation. This publication draws together the best new research and writing on General Marshall and his times as well as provides a spotlight on what the Foundation is doing and what we have in our own archival holdings.

In this edition, we serve up a sizeable slice of Marshall's career across both World Wars as well as shed light on some of Marshall's activities in the shadowy, yet vital, world of codes and code-breaking. Anyone with even a cursory understanding of the history of armed conflict knows that the 20th century saw the beginning of the exploitation of the air for strategic and tactical advantage. General Marshall's role in the creation of the modern United States Air Force is discussed by Dik Daso who also shows that Marshall was one of the earliest exponents of the potential of airpower and that his advocacy, throughout his long career, played a significant role in its development. Ed Lengel, writing on Marshall's formative experiences as part of the American Expeditionary Forces on the Western Front in World War One, narrates how Marshall was shaped by his early exposure to modern, industrialized warfare on a massive scale and also how Marshall would take and relate his "lessons learned" then and employ them to great effect in World War Two, a consideration that is at the heart of the current Marshall Legacy Series sequence on the two World Wars. In addition to these pieces, David Sherman shines a light in the goings on behind the front line and examines the creation of the Signal Intelligence Service and Marshall's key role in the allied code breaking efforts before and during World War Two, efforts that gave the allies a vital and arguably war-winning advantage.

I'm sure you all noticed the bright cover of this edition in particular. This image is significant for several reasons, firstly and most obviously, it features amongst a pantheon of American heroes the personage of our own General Marshall, appropriately in the lead. This comic, published in 1941 is one of half a dozen different titles to feature General Marshall, the most recent of which dates to 1984. It is appropriately emblematic as one of our intended aims is to bring General Marshall back into popular consciousness in such a fashion that all Americans will be able to learn from his example. This cover reminds us of a time when this was indeed the case. The comic itself is part of our archival collections here at the Foundation and is available for inspection, along with those others I mentioned, in the library. There is much more besides in this edition of MARSHALL magazine. I'm delighted to say that we have made the decision, based on the very positive reactions to the first two magazines, to produce this publication twice in 2017 (and hereafter). I hope you enjoy it!

Sincerely,

Rob Havers, *President*

photo credit: George C. Marshall Research Library

Arnold was Marshall's right-hand man for Army aviation. Together, they poured the foundation of American air power, cured the technology through testing, and then stood upon its strength in combat.

George C. Marshall, Henry H. "Hap" Arnold and The Birth of American Air Power

BY DIK DASO, PH.D.

From 1870 through the early 1900s, America transformed from a country of farmers to a nation of city-dwellers. Urban migration gradually altered American life and was driven by the widespread use of electricity in homes and in factories; the telephone; and rapid mechanization that had its foundation in ingenuity and the development of the internal combustion engine. Mechanization forever changed farming efficiency, factory production capability, and everyday living that focused on automobility through the "Roaring Twenties." Americans, in general, maintained tremendous national optimism despite the ravages of the First World War.

It was during these years of remarkable technological change that George C. Marshall (b. 1880) and Henry H. Arnold (b. 1886) grew up. Both graduated college while the energetic progressive president Theodore "Teddy" Roosevelt launched the Great White Fleet on its global tour and built the Panama Canal joining the Atlantic and Pacific oceans through that Central American isthmus—the canal considered a modern miracle at the time. While conquering the natural environment through Panama was one thing, American leadership had also embraced the tenets of Manifest Destiny and Social Darwinism. Expanding American influence beyond national boundaries began during the Spanish-American War at the turn of the century and continued beyond World War I.

photo credit: George C. Marshall Research Library

Henry H. "Hap" Arnold

As American industrialization reached its apex, these boys' lives became entwined with America's fascination with powerful machines, new means of transportation, including the first successful efforts to break away from earthly bonds in craft created of sticks, fabric, and wire; powered by small, gas-powered engines. On December 17, 1903, the Wright brothers made the first flights that eventually transformed every aspect of daily living, communication, and military conflict. Marshall and Arnold were born into an era of remarkable technological change, expansionist national philosophy, and progressive leadership that provided them the necessary tools to envision and then create American air power during their military careers.

This article is a summary of the author's Marshall Legacy Series kickoff talk for the *Speed and Fury* sequence that he delivered at the Marshall Foundation in May 2016.

photo credit: George C. Marshall Research Library

George C. Marshall during WWI

George Marshall graduated from the Virginia Military Institute in 1901. His class ranking was about in the middle of 34 cadets. Henry Arnold graduated West Point in 1907 holding a similar class ranking. Both had higher military ratings than academic ones. Both played varsity football. Both were commissioned into the infantry. Both held unique positions of leadership while at school. Marshall, near perfect militarily, became First Captain his senior year at VMI. Arnold, who marched many "area bird" tours, led the notorious "Black Hand" while an upperclassman. He planned and directed covert missions of hell-raising across the West Point campus. One of these, lighting fireworks atop the academic building, earned him restriction to quarters during much of the last half of his first class year. Both young men, one more conventional and the other less so, gained valuable experience leading and inspiring their classmates.

Marshall entered the infantry after graduation from VMI in 1901. His commission as a second lieutenant was signed by President Theodore Roosevelt himself. Marshall became aware of early flight experiments at Fort Leavenworth during a lecture presented by the Chief Signal Corps officer but became more personally involved in 1909. Army flight trials were taking place at Fort Myer outside Washington, DC. The object of the trials was to verify that the Wright "aeroplane" built for the U.S. Army met the military specifications delineated in the original contract. The plane needed to carry two people for 20 miles at an average speed of 40 miles per hour. The year before, the trials had failed when the Military Flyer, piloted by Orville Wright, crashed, killing the military observer, Lt. Thomas E. Selfridge, on board and nearly taking Orville's life as well.

The 1908 Wright Military Flyer arrived at Fort Myer, Virginia aboard a wagon.

The 1909 military navigator-observer was Benjamin Foulois. Lt. Foulois had tested dirigibles for the Army in the past but was unimpressed by their performance. Marshall was in town and had a room at Fort Myer during the trials. His roommate, coincidentally, was Benjamin Foulois. It is not difficult to imagine the spirited conversation that might have occurred between Marshall and Foulois after the completion of the successful trial flight. Perhaps it was during these conversations that Foulois revealed that he had been selected as the test passenger not because of superior technical abilities but rather because he was a small man of light weight. It did not hurt that he was a trained map reader as well.

Marshall and Foulois met again when both were assigned to the First Maneuver Division sent to patrol the American border with Mexico. Marshall acted as assistant to the Chief Signal Officer while Foulois flew one of the two aircraft assigned to the unit. During one particular field exercise, Marshall discovered that aerial reconnaissance procedures required clear communications if pilot reports were to be of any value. Foulois, sent in search of an "enemy" cavalry unit, reported back to Marshall that the target was located to the west of a prominent "manure pile." Not knowing where the reported pile of manure was on a map, Marshall had to guess at the actual location of the cavalry unit. Marshall's early experiences with Army aviation provided him valuable understanding of the capabilities and potential of early planes and predated Arnold's involvement as an aviator. Arnold did not earn his Army wings until mid-1911. From that point forward, Marshall became an aviation advocate while Arnold became the technician and executor for Army air power.

U.S. Air Force photo

Kettering Aerial Torpedo "Bug"

Early flight was extremely dangerous. Dozens of pilots lost their lives in airplanes more resembling box kites than flying machines. Arnold almost joined that list of fatalities in 1912 during Army field exercises at Fort Riley, Kansas. During a landing attempt in a Wright C Military Flyer, Arnold inexplicably lost control and plummeted toward the earth. Releasing the control stick just prior to impact, the plane miraculously righted itself just long enough for Arnold to regain control and make a survivable landing. He later attributed his survival to a "guardian angel," rather than any particular piloting skill and did not fly again until 1916.

Ironically perhaps, Arnold's near catastrophic 1912 flight became critically important to Army aviation history because soon after he grounded himself, he was reassigned to the infantry and transferred to Fort William McKinley in the Philippines. He and his new wife, Bee, lived nearby George and Lily Marshall where they became friends. Both women suffered through medical issues during this time, Lily with thyroid trouble and Bee with pregnancy problems. They supported each other while their husbands were in the field—Marshall leading training exercises from headquarters while Arnold supported him in the field. Arnold was so impressed by Marshall's military skills that upon returning from one deployment he reported to Bee that Marshall was destined to become Army Chief of Staff one day. His prediction came true a quarter century later.

As World War I began in Europe, Arnold and Marshall returned stateside for a time. Arnold returned to the air service and began flying again in 1916. Marshall, who eventually became General John Pershing's military planner, followed him overseas as a member of the American Expeditionary Force in 1917 where he excelled and continued his rise to high command. Arnold went to the recently opened Panama Canal where he unsuccessfully attempted to establish an Army airfield in the Canal Zone prior to America's declaration of war in April 1917. Both Marshall and Arnold had been promoted to full colonel—Arnold becoming the youngest in the Army for a time—and while Marshall remained with Pershing, Arnold went to Washington assigned to the Air Service staff. But he was rarely ever in town as his tasks of locating and establishing Army airfields across the country and dealing with industries that had been tasked to build thousands of airplane engines took 18-20 hours each day in between train rides from city to city.

In addition to these brutal hours and endless travel, Arnold was involved in a secret project officially known as the "Liberty Eagle." Also known as the "Flying Bomb (FB)" and the Kettering Bug, this small, unmanned, explosive-laden biplane was designed by a team of scientists and engineers that read like a "who's who" of American geniuses. Henry Ford, Elmer Sperry, Boss Kettering, and Dr. Robert Millikan were all part of the clandestine team. Arnold oversaw the project's progress and used the opportunity to deploy to the front lines in Europe in an effort

to convince Gen. Pershing to use the weapons in combat. By fall 1918, Arnold was on a troop ship to Europe but became so ill with the flu that was crippling the world that he never had a chance to convince the Army staff to use the "FB" and the November 1918 armistice ended any possibility of such an experiment.

The Marshall-Arnold professional working relationship—although an indirect one—had been established during The Great War. Marshall served with distinction as part of the Army administrative staff while Arnold held similar responsibilities for the Air Service alone. Both were staff officers rather than combat commanders, and they embraced these roles for the rest of their Army careers.

The years between the wars witnessed slow but steady technological changes in America. The twenties boom, driven by the popularity of the automobile, quickly yielded to the Great Depression and the military restrictions that resulted from a collapsed economy. Both Marshall and Arnold endured personal tragedies during these years—losses that affected their personas for the rest of their lives. Arnold's two-year-old son, John Linton, suddenly died from complications of a ruptured appendix in July 1923. So terrible was the tragedy that Arnold did not even mention the loss of his darling boy until many years later. His hair went from blonde to white by the end of that year. Equally horrible was Lily Marshall's death in September 1927 after 26 years of companionship. Marshall had trouble adjusting to the life of a widower and filled his Fort Benning home with Lily's photographs, a practice that ended only after he remarried.

The Marshall-Arnold professional working relationship had been established during The Great War. Marshall served with distinction as part of the Army administrative staff while Arnold held similar responsibilities for the Air Service alone.

In January 1931, Arnold's mother suddenly died. She had succumbed after an early morning heart attack. Arnold took her death as hard as he had taken John Linton's. Shortly after her death, Arnold changed his signature that he attached to his personal letters from "Sunny," his mother's pet name for him, to "Hap." From mid-1931 onward, but never before, that nickname stuck and he used it in all his correspondence after that.

Such grave personal tragedy made both Marshall and Arnold more compassionate commanders. On a personal level, they understood the pain that accompanied the loss of a spouse, child, or close family member. Such loss also resulted in their desire for meticulous attention to details and ever-present efforts to improve safety on the ground or in the air. It was one thing to lose a life in combat, but such a loss during peacetime or during training was much more difficult to tolerate.

Aerial experiments that seemed completely misdirected were sometimes risky but also calculated prior to operations in the air. In 1923, for example, Arnold had ordered four of his young pilots to attempt mid-air refueling for the first time. After careful study and some audacious flying, the mission succeeded. Again, in 1929, a more public refueling mission took place over Pasadena, California. On New Year's Day, just in time for the Rose Bowl game between Georgia Tech and the California Golden Bears, two Army aircraft slowly rose into the sky above Southern California. The receiver aircraft was humorously nicknamed "?" (The Question Mark) by

the Army because none were sure how long the plane could remain in the air. In fact, the refueling experiment ended on 7 January after a series of fuel spills and slow deterioration of the engines forced mission commander, Carl Spaatz, to order the landing. The flight broke the previous record for refueling duration after more than 150 hours in the air. The game drew more national attention than the flight when Cal's center, Roy Riegels, recovered a Tech fumble and ran the wrong way until stopped by his own teammates before being tackled by the Tech offense just short of the Cal goal line. Cal elected to punt rather than risk any offensive play so close to the end line. Tech blocked the punt scoring a 2-point safety that turned out to be the margin of victory for that year's national champion Yellow Jackets. It is difficult to say that there was no direct impact on those who witnessed the flight. "Wrong Way Riegels" later served in the Army Air Forces during World War II.

The Question Mark (*below*) being refuelled by a Douglas C-1 (*above*)

As nationalism grew in both Asia and Europe, the Army kept pace with rapidly changing aviation technology. In 1934, airmen under Hap Arnold's command participated in two significant air operations—both helped shape the future of Army aviation for the next decade.

Both Marshall and Arnold had served as Civilian Conservation Corps (CCC) camp commanders in the early 30s, but Arnold also held command of the Army's air forces at March Field, California. When Postmaster James Farley cancelled all civilian air mail carrier contracts, the Army Air Corps, commanded by Benjamin Foulois, volunteered to carry the air mail. While the weather was some of the worst on record in early 1934 which contributed to dozens of accidents and several fatalities while accomplishing the task, the Air Corps demonstrated determination and courage despite the deplorable condition of many of their aircraft. Arnold led the Western Division, a command that he once called a "political football." While Foulois bore the brunt of journalist's criticism for losses, President Roosevelt supported the Air Corps. In 1936, budget money held for New Deal efforts elsewhere was released to Army aviation for aircraft improvements. During the final few weeks carrying the mail, the Air Corps added the Martin B-10 medium bomber to its inventory. The B-10 carried heavy loads and dramatically increased the volume of air-carried mail.

During the summer of 1934, Arnold took the lead of ten Martin B-10 aircraft and flew a record-setting mission from Washington, DC, to Fairbanks, Alaska and back. The flight covered more than 18,000 miles and demonstrated tremendous logistical skill and precise planning. The near flawless execution of the flight helped to calm the media storm that had erupted during the Air Mail debacle earlier in the year. Arnold's leadership was critical to the mission's success, but the demonstration of Air Corps technology was also vital to establishment of future doctrine for the air arm. In 1935, both the Air Corps Tactical School (ACTS) and the GHQ Air Force were established. The GHQ held responsibility for developing wartime plans for the Air Corps while the ACTS developed the doctrine of precision, daylight, high-altitude bombardment that guided the Army Air Forces during World War II.

Martin B-10 during exercises over Oahu, Hawaii, 1941

During the late 1930s, Arnold continued to cultivate relationships with aviation industrialists and, more importantly, aeronautical scientists like Theodore von Kármán. The subject of aviation technology became the very first topic of conversation when Hap Arnold and George Marshall rekindled their working relationship in 1938. Marshall, now Deputy Chief of Staff of the

Gen. "Hap" Arnold at his desk in the War Dept. in 1941

photo credit: George C. Marshall Research Library

Army, was incredulous when Arnold, now Chief of the Air Corps, explained the importance of civilian scientists to the development of Army aviation. "What on Earth are you doing with people like that?" Marshall asked. Arnold relied, "Using their brain power to develop devices too difficult for the Army engineers to develop themselves."

The day that Marshall was promoted to chief of staff he was enroute to California from Washington, DC, with Hap Arnold and Carl Spaatz aboard an Army bomber. Nearing the Mississippi River, the crew received a radio message that confirmed Marshall as chief. From that moment on, Arnold was Marshall's right-hand man for Army aviation. Together, they poured the foundation of American air power, cured the technology through testing, and then stood upon its strength in combat.

Marshall and Arnold received unique preparation for their eventual leadership positions. Marshall had excelled as a student at staff school and then shaped Army staff training at several different locations—Chicago, Fort Benning, and Washington, DC. Arnold attended the Army Industrial College in DC and the General Service School at Fort Leavenworth. He ran the Fairfield Air Depot, the Army's logistics base for aviation technology. Yet from 1939 through 1945, the overarching task Marshall and Arnold faced was the expansion of the Army. Army ground forces swelled to more than 8 million while the Army Air Forces topped 2.4 million—both tenfold increases. Managing this explosive expansion of troops and equipment took nearly all of their time and effort. Arnold later swore that handling that task nearly killed him. He suffered from heart problems during the last two years of the war. Marshall was well aware of Arnold's medical condition, yet was so dependent upon his leadership of the air arm that he kept him on the staff rather than insisting upon his retirement.

Both Marshall and Arnold moved in very high circles during wartime. Marshall had FDR's ear on all military matters, offered his opinions candidly but professionally, and was not intimidated by controversy. The Army duo attended war conferences together and while Arnold remained subordinate to Marshall at all times, he carried Marshall's support into conferences with Allied air commanders and staffs. Arnold often spoke through Marshall but was frequently found in the offices of Secretary of War for Air, former naval aviator Robert Lovett, or FDR's personal advisor Harry Hopkins. But when it came to matters of aviation technology, Arnold was Marshall's guru. Arnold knew everyone in aviation—industrialists, professors, scientists and engineers. He

photo credit: George C. Marshall Research Library

Generals Arnold (left), Eisenhower (center) and Marshall at Normandy in June 1944

sat on aeronautics boards and was aware of all the major projects underway at the National Advisory Committee for Aeronautics (NACA) and in the Department of the Navy. His career-long association with Army air made him the focal point for all aviation-related issues. The close working relationship between Marshall and Arnold at that moment in time remains one of the great collaborations in American military history.

While personnel numbers grew, Arnold took to the road. He visited aircraft factories across the country encouraging workers and supervisors to push for maximum effort in support of American air power. On the scientific side, Arnold authorized refueling tests that were carried out by bomber aircraft, he provided a British jet aircraft engine to Larry Bell's aircraft company that resulted in the creation of the XP-59, America's first jet plane. As a member of NACA, he handed out aeronautical projects to university staffs to solve problems encountered during Army aeronautical testing.

Arnold authorized budget money to build enormous wind tunnels used to test airplanes before production began. Scientists like Theodore von Kármán both advised Arnold to build these facilities and then participated in the testing that followed their completion. Data gained from tunnel testing provided the ability to refine aircraft designs and also to repair problems that developed after operational flights had begun.

Some of Arnold's technology projects seemed more like fantasy than reality—some called them "Buck Rogers-ish." Arnold's research engineers developed a remote control system for glide bombs. Arnold hoped to keep his airmen from flying into deadly flak belts over important combat targets. Project APHRODITE developed a series of glide bombs with radio control. The final version of the glide bomb actually included a television camera that allowed accurate steering from the trailing mother ship.

A B-17 converted for Project APHRODITE

The second element of APHRODITE consisted of B-17 bombers deemed unsafe for combat flights that were converted into large flying bombs. Each bomber was filled with TNT and then, after the crew parachuted to safety from the craft, it was guided by radio signals to its target. Several of these "war weary" aircraft were launched against German targets in Northern France with limited success.

All of these technological efforts, and many more, were reported to Marshall by Arnold, some secretly, others as part of the War Reports from each service chief to the Chief of Staff submitted in 1944 and 1945. While Marshall staunchly supported the strategic air effort in Europe and in the Pacific, he had doubts that tactical aviation, particularly interdiction and close support were as effective against the enemy. His views changed during OVERLORD, the June 1944 invasion of Europe. After the successful operation at Normandy, Marshall recognized that the situation finally allowed the "proper application of air power in a combined operation."

Generals Marshall and Arnold saluting the troops

photo credit: George C. Marshall Research Library

Shortly following the breakout after the landings in France, Marshall turned his focus to solving one of the long-standing questions related to Army aviation. Should the air arm be an independent service, or should it remain under Army command? Arguments over independence dated back to the days of the outspoken Billy Mitchell, American air commander during World War I. Debate continued between the wars led by Frank Andrews and Hugh Knerr. But Hap Arnold and George Marshall recognized the consequences of creating an independent air service as the nation prepared for and then fought a global war. They understood the administrative problems that such a split would generate—a completely new staff, new budgets, new bases, and new methods of operating alongside sister services. The split would have to wait until WW II victory had been achieved.

Marshall understood the fundamentals of Army aviation. While most military thinkers understood infantry, cavalry, and tanks, few really understood airplanes. Marshall explained that, "when it came to aviation, the development had progressed with such leaps and bounds, such unbelievable advances in speed and distance, in altitude, and in size, that it staggered the imagination. The very nature of air development made it difficult to forecast a solution in military preparedness." When the Joint Chiefs returned stateside after D-Day, Marshall ordered Arnold as Commanding General of the Army Air Forces to "assume responsibility for research, development, and procurement," the precursor to the creation of an independent air force. By mid-August Arnold had convinced Kármán to serve with the Army Air Forces leading a scientist's invasion of Europe. They were to gather as much aeronautical information as possible from enemy facilities, evaluate their findings, and prepare a report forecasting aviation possibilities for the next several decades. Kármán's Scientific Advisory Board produced an initial report, *Where We Stand*, and the final report, *Toward New Horizons*, each playing a major role in Air Force technical development for two decades.

Both believed that personal integrity resulted in trust and formed the foundation of one's character.

While the final move toward independence for the Army air arm took an additional two years after the war had ended, Marshall and Arnold held a clear vision for what America's Air Force

would be. The strategic bombardment mission held exclusively by the Army Air Forces came under attack by Navy leadership during 1946 and 1947. The real argument was not about the employment of strategic bombers. Most agreed that such a role belonged with the Army Air Forces. It was about the inevitability of losing a sizable portion of annual budget money to organize, train, and equip the independent Air Force. While Arnold retired in February 1946, Marshall was sent to mediate the Chinese civil war but the wheels of change had been placed in motion and the U.S. Air Force became an independent service on 18 September 1947.

Hap Arnold was not happy with the final legislation creating the Air Force, but he felt it was the best possible compromise considering the political power of and the support for the U.S. Navy across the country. One thing was certain, Arnold recognized the critical role that George Marshall played in establishing the Air Force. "It is hard to think how there could have been any American Air Force without him."

photo credit George C. Marshall Research Library

Pheasant hunting in North Dakota

The Marshall/Arnold legacy has endured not only because these two men succeeded during years of great national challenges but because they adhered to principles that they felt essential to their own success. Both believed that professional knowledge, common sense, unrelenting hard work, strength, and selflessness formed the foundation of leadership. Both believed that personal integrity resulted in trust and formed the foundation of one's character. Marshall highlighted optimism and extreme loyalty as measures of leadership while Arnold believed in vision that created power to convert dreams to reality. Neither claimed to be perfect leaders, but both trusted in their experience and judgment regarding human nature to make the best decisions possible.

In the end, these two Pennsylvanians came together at just the right times and in just the right places. Their wartime command cemented Allied victory in WWII and created the independent U.S. Air Force on the heels of the Army Air Forces' strategic success during that global war. Marshall's loyal advocacy and dedicated support of Arnold's technical vision resulted in the birth of American air power.

Dik Daso, an Air Force Academy graduate, is a retired Air Force fighter pilot. He served as the curator of Modern Military Aircraft at the Smithsonian's Air and Space Museum for 10 years. He received a Ph.D. in history from the University of South Carolina where he teaches 20th century American history. Daso has written several books and articles focused on aviation technology and biography, including *Hap Arnold and the Evolution of American Airpower*, which was awarded the American Institute of Aeronautics and Astronautics History Manuscript Award in 2001, *Doolittle: Aerospace Visionary*, and *U.S. Air Force: a Complete History*.

photo credit: George C. Marshall Research Library

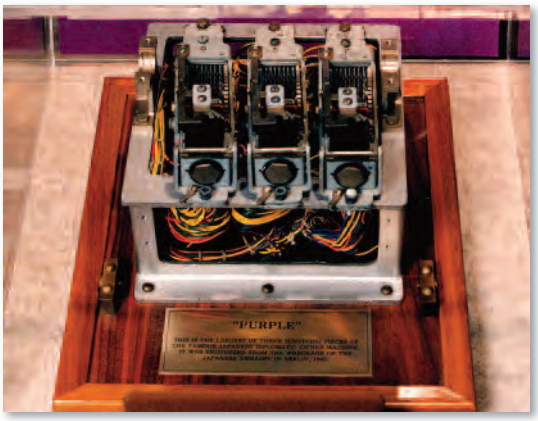
Marshall's insight, however, was that codebreaking was not just a way to penetrate the innermost secrets of Nazi Germany and Imperial Japan. He recognized that it also was a strategic asset….

Marshall and the Codebreakers

BY DAVID SHERMAN, PH.D.

In the fall of 1940, George Marshall had what may have been one of his more unusual encounters as Army Chief of Staff. Leaving his suite in Washington D.C.'s Munitions Building, which housed the War Department prior to its move across the Potomac River to the Pentagon, Marshall made his way to an office in the rear of the building on its second floor. It is not known whether there was any sign indicating who worked there, and if there were, it almost certainly would not have contained the name of the organization behind the closed door. The office housed one of the Army's most secret organizations: the Signal Intelligence Service or SIS.

Founded in 1930, SIS was dedicated to the breaking of codes and ciphers protecting the secret communications of America's potential adversaries. Marshall was a strong supporter, authorizing additional funding that allowed the SIS to grow from a staff of 19 when he became Chief of Staff in September 1939 to around 100 at the time of his visit one year later. He also accepted a relaxed view of a law that otherwise would have rendered the organization unable to do its job. This statute generally banned the interception of communications coming into the United States. However, the law also did not explicitly bar it if done by the military for training purposes and to improve the codes it used to protect its own communications.



Fragment of a "Purple" cipher machine obtained by the U.S. Army at the end of World War II

While the SIS did teach its personnel how to make codes, it also was engaged in something very different. In the decade prior to Marshall's visit, it had mounted a full-scale attack on Japanese ciphers, particularly those protecting Tokyo's communications with its embassies overseas. At the time Marshall stopped by, the SIS had just had its greatest success: cracking a cipher it had designated "Purple," a system that Japanese diplomats had introduced in 1939 to improve security.

photo credit: George C. Marshall Research Library

MG Spencer Akin served as Chief Signal Officer from 1947–1951. As a colonel he escorted Gen. Marshall around SIS headquarters in 1940.

When Marshall entered the SIS office, he was met by its head, Colonel Spencer Akin, and escorted to one of its inner rooms. Akin had told one of his subordinates, a young Lieutenant named Frank Rowlett, to prepare a demonstration of a machine the SIS had built to decrypt Japanese messages sent in the Purple cipher. Given that Akin had not told Rowlett who his presentation would be for, Rowlett was stunned when the door opened and the Chief of Staff himself entered. Told to keep his briefing to ten minutes, Rowlett hurriedly composed himself and proceeded to explain the SIS decryption machine. Marshall was so taken with the device, however, that he ended up staying two hours, at one point asking Rowlett to remove its cover so he could see its inner workings in action.

Rowlett, who had taught high school mathematics in southwestern Virginia before joining the SIS, would have another high-ranking visitor in the coming weeks, Secretary of War Henry Stimson. Having read decrypted cables that contained instructions from the Japanese Foreign Minister to his Ambassador in Washington for negotiating with the United States, Stimson exclaimed how fortunate it was that he now had a window into the thinking of the leaders of a nation that at the time was a political rival but might turn into a military opponent. It was Marshall, however, who at the end of his briefing made the more astute observation. If we could do this to the Japanese, he asked Rowlett, could not they be doing exactly the same thing to the United States and be secretly reading Washington's own communications?

"If we could do this to the Japanese," he (Marshall) asked Rowlett, "could not they be doing exactly the same thing to the United States and be secretly reading Washington's own communications?"

Colonel Akin told Marshall he thought not, and explained that the SIS was using what it had learned from cracking Purple to build an American machine that was even more secure. Marshall's question, however, showed how readily he perceived the tasks ahead. The SIS had given him an important strategic advantage, but in using it he also would have to take great care to ensure the Japanese did not suspect their security had been breached. The security of America's own communications also had to be improved. Moreover, although Marshall could have at best only guessed it at the time, once in the war America would have to do all this in coalition with allies such as Great Britain, which—it would turn out—had its own sophisticated code-breaking operation.

Marshall moved quickly to protect the intelligence coming from the SIS, which came to be known in American circles as "Magic." After one report was found in an ordinary wastebasket

photo credit: George C. Marshall Research Library

William F. Friedman (standing, center) with other members of the SIS

at the White House, having been absentmindedly tossed there by Roosevelt advisor Edmund "Pa" Watson, Marshall instituted a system of locking bags for couriers to use when carrying decrypts. He also told the Army's senior intelligence officer, Brigadier General Sherman Miles, to tighten their distribution to only a few very senior political and military officials. Finally, Marshall ordered Army couriers to wait while these officials read the decrypts and then return them to the War Department for storage.

These measures helped to ensure that the codebreakers' success against Tokyo's communications remained secret, but they came at a cost. This became clear with Japan's surprise attack on Pearl Harbor. Miles and his Navy counterpart knew that intelligence from Magic was not being sent to the two military commanders on Oahu, Admiral Husband Kimmel and General Walter Short, due to a fear this would increase the chances the Japanese would learn their security had been compromised. Top officers such as Marshall, however, mistakenly thought either that the decrypts themselves were making their way to Kimmel and Short or that the latter were receiving summaries of intelligence from them.

Marshall would later be criticized for the vagueness of his memory on this point when questioned by postwar Congressional investigators. He also would admit the decrypts were so voluminous that he did not have time to read them all. Congress concluded, however, that while the decrypts pointed to a steady deterioration in relations between Washington and Tokyo during the second half of 1941, none of them contained any information indicating the timing or target of any military operations, at Pearl Harbor or otherwise, and thus at best could only have warned Kimmel and Short that ties between the U.S. and Japan were approaching a breaking point. Though revisionist historians and conspiracy theorists have made repeated attempts to challenge this judgment, it has withstood the test of time.

With America in the war, Marshall took steps to ensure that commanders responsible for defending vital installations such as the Panama Canal or critical supply routes in the Atlantic received intelligence from Magic when it indicated threats to such interests, in some cases going so far as to ask that a specific decrypt be shared with a particular officer. He also would reach

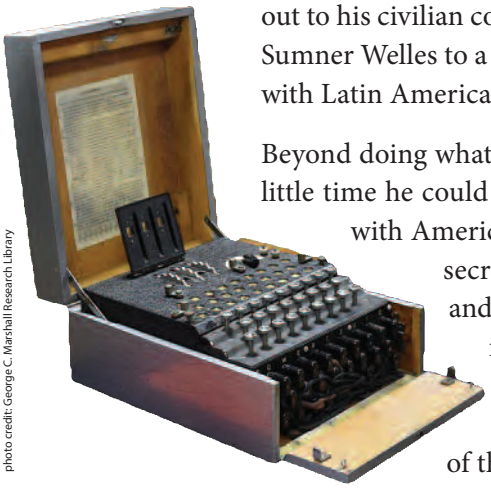


photo credit: George C. Marshall Research Library

The machine used to break the German "Enigma" code

out to his civilian counterparts, at one point directing the attention of Under Secretary of State Sumner Welles to a series of decrypts on Japanese efforts to undermine Washington's relations with Latin America.

Beyond doing what had to be done to protect the security of Magic, Marshall dedicated what little time he could spare from his other responsibilities to managing codebreaking relations with America's new partner in the Grand Alliance, Great Britain. London had its own secret decryption effort, one far more advanced than that of the United States, and had made significant progress toward breaking Nazi Germany's supposedly impenetrable Enigma machine. Its main success had been against the Enigma system used by the Luftwaffe during the Battle of Britain, one that in time would be followed by similar breakthroughs against the variants of the Enigma used by the Wehrmacht and—critically—Germany's U-Boats.

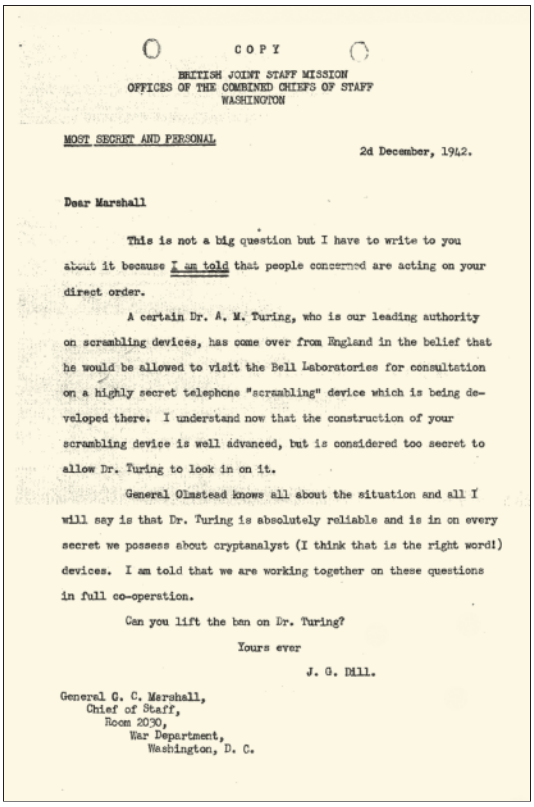
Around the time of Marshall's visit to the SIS in the fall of 1940 to see the machine it had built to break Purple—but still a year before Pearl Harbor and America's entry into the war—he and Stimson had agreed to a British proposal for a secret exchange of scientific information. In addition to new technologies such as radar that London had proposed, the two put forward codebreaking as a topic for discussion. The following February, a four-person American team—two officers each from the Army and the Navy—paid a visit to Bletchley Park, Britain's secret wartime codebreaking center north of London.

This act began what was unquestionably the strongest alliance in history between intelligence services of two nations...

Initially, Prime Minister Churchill instructed Bletchley's leaders not to disclose their Enigma success. With the approval of Marshall and Stimson, however, the Americans had brought with them one of the machines they had built to decrypt Purple and presented it as a gift to the British, who had made far less progress against Japanese ciphers than German ones. This broke the ice. Churchill reversed his decision, and Bletchley revealed to the American visitors its penetration of the Enigma. This act began what was unquestionably the strongest alliance in history between intelligence services of two nations, one that would prove critical during the conflict with Germany and Japan.

The first eighteen months of the partnership were not without their tense moments, however. In addition to Bletchley, the British had a worldwide network of sites dedicated to the interception of Axis communications. America's codebreakers were eager to develop their own such system. They also wanted the British to share more of their intercepts of Enigma communications so that they could gain experience in breaking them. Moreover, following the November 1942 Allied landings in North Africa and the beginning of actual combat between American forces and the Wehrmacht, what had been American suggestions began to sound more and more like demands.

The British were wary. Viewed from Bletchley, the American proposal to first send intercepts of Enigma communications across the Atlantic for decryption and then forward the resulting intelligence to Generals Eisenhower and Patton in North Africa would raise the risk of com-



COPY

BRITISH JOINT STAFF MISSION
OFFICES OF THE COMBINED CHIEFS OF STAFF
WASHINGTON

MOST SECRET AND PERSONAL

2d December, 1942.

Dear Marshall

This is not a big question but I have to write to you about it because I am told that people concerned are acting on your direct order.

A certain Dr. A. M. Turing, who is our leading authority on scrambling devices, has come over from England in the belief that he would be allowed to visit the Bell Laboratories for consultation on a highly secret telephone "scrambling" device which is being developed there. I understand now that the construction of your scrambling device is well advanced, but is considered too secret to allow Dr. Turing to look in on it.

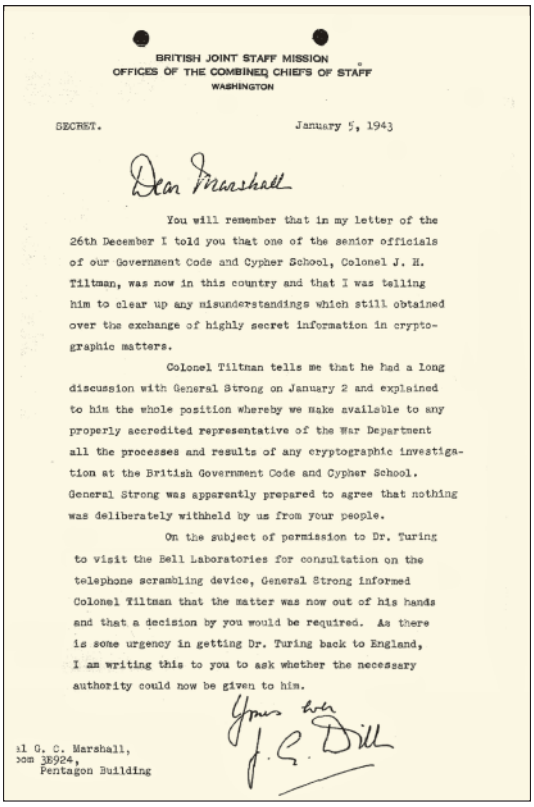
General Olmstead knows all about the situation and all I will say is that Dr. Turing is absolutely reliable and is in on every secret we possess about cryptanalyst (I think that is the right word!) devices. I am told that we are working together on these questions in full co-operation.

Can you lift the ban on Dr. Turing?

Yours ever

J. G. Dill.

General G. C. Marshall,
Chief of Staff,
Room 2030,
War Department,
Washington, D. C.



BRITISH JOINT STAFF MISSION
OFFICES OF THE COMBINED CHIEFS OF STAFF
WASHINGTON

SECRET.

January 5, 1943

Dear Marshall

You will remember that in my letter of the 26th December I told you that one of the senior officials of our Government Code and Cypher School, Colonel J. H. Tiltman, was now in this country and that I was telling him to clear up any misunderstandings which still obtained over the exchange of highly secret information in cryptographic matters.

Colonel Tiltman tells me that he had a long discussion with General Strong on January 2 and explained to him the whole position whereby we make available to any properly accredited representative of the War Department all the processes and results of any cryptographic investigation at the British Government Code and Cypher School. General Strong was apparently prepared to agree that nothing was deliberately withheld by us from your people.

On the subject of permission to Dr. Turing to visit the Bell Laboratories for consultation on the telephone scrambling device, General Strong informed Colonel Tiltman that the matter was now out of his hands and that a decision by you would be required. As there is some urgency in getting Dr. Turing back to England, I am writing this to you to ask whether the necessary authority could now be given to him.

Yours ever
J. G. Dill

al G. C. Marshall,
oom 3E924,
Pentagon Building

photo credit: George C. Marshall Research Library

Field Marshal Sir John Dill beseeched Gen. Marshall to authorize permission for Alan Turing to visit the Bell Labs to consult on the "highly secret telephone 'scrambling' device which is being developed there."

promising Britain's codebreaking success to unacceptable levels. A fairly tense exchange ensured. At one point, senior Army intelligence officers lobbied Marshall to press the senior British military liaison in Washington, Field Marshal Sir John Dill, to accede to their demands for access to raw Enigma intercepts. Perhaps mindful of a recent but separate dispute that his intelligence advisors had created when they asked him to intervene with Dill against a British request that renowned Bletchley Park cryptologist Alan Turing be allowed to visit Bell Laboratories, where the Army was developing a new secure telephone system—a visit Marshall allowed when he realized how important it was to the British—Marshall simply directed them to work out with the British whatever differences they had over Enigma.

Realizing that neither Marshall nor the British high command would allow their dispute to affect the overall Anglo-American alliance, the leaders of the two codebreaking efforts worked out a compromise that allowed America to post over two hundred military personnel at Bletchley, where they would participate in day-to-day codebreaking activities and select key decrypts for forwarding to American commanders in the field. In exchange, the United States agreed to use British security procedures for delivering decrypts to the front lines and established a network of officers at U.S. military headquarters worldwide who were trained to Bletchley's standards for protecting and using intelligence from codebreaking in war zones. This compromise was codified in the landmark "British-United States Agreement," or BRUSA, ratification of which was approved in 1943 by Stimson and Marshall.

The importance of keeping the codebreaking alliance on track may have been one reason why Marshall was quick to act when there was the slightest possibility that American or British

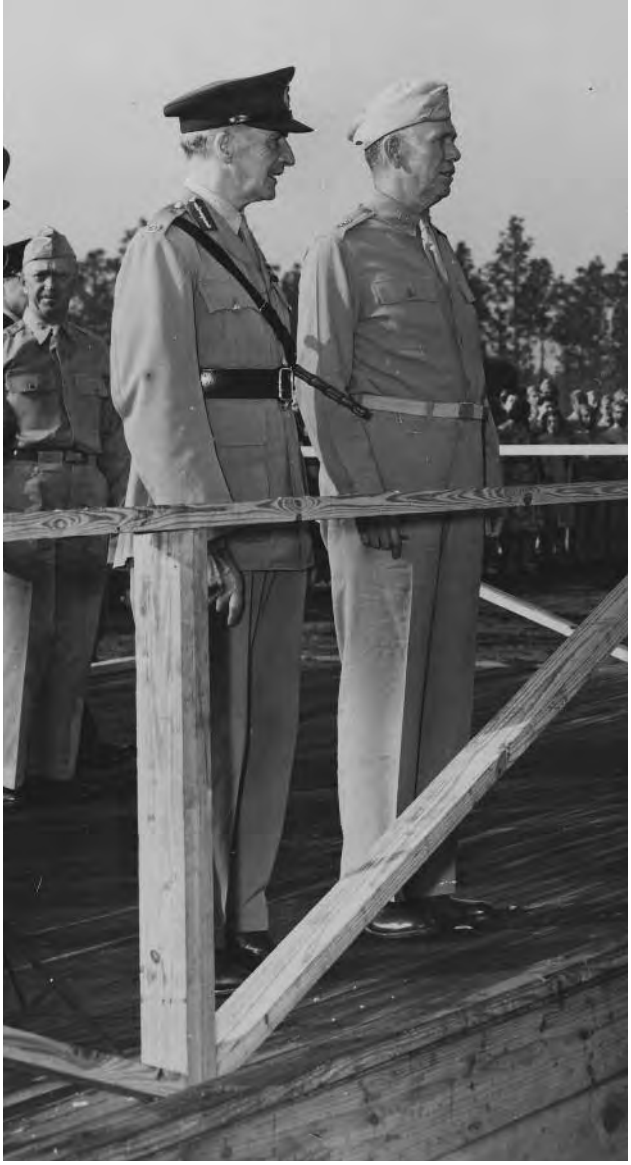


photo credit: George C. Marshall Research Library

Cooperation between Sir John Dill and Gen. Marshall was a crucial element of allied codebreaking efforts.

successes could be compromised. Given the importance that Churchill placed on Bletchley—he called the decrypts of German communications it produced his "golden eggs" and those who secretly produced them "the geese who didn't cackle"—it was imperative to preserve the secrecy surrounding Magic and its British counterpart, Ultra. One of Marshall's first challenges came in June 1942, when several newspapers ran articles after the Battle of Midway claiming that U.S. intelligence had advance information about the precise strength and movements of a Japanese task force approaching the central Pacific island. As Admiral Chester Nimitz had in fact used intelligence from codebreaking to ambush the Japanese, sinking four carriers at the cost of only one of his own, Marshall saw such stories as coming dangerously close to revealing the Magic secret. Accordingly, he urged his Navy counterpart, Admiral Ernest King, to hold a press conference and say that Nimitz had been expecting the Japanese to retaliate for the Doolittle Raid against Tokyo that April and simply positioned his ships accordingly, initiating aggressive air patrols that detected the approaching Japanese fleet. While obviously not telling the full story, this characterization was factually correct and also protected Magic.

A year later, when an Army general boasted that the shooting down of a plane carrying Japanese Pearl Harbor architect Admiral Yamamoto Isoruku on an inspection tour in the south Pacific had resulted from the decryption of a coded message containing his itinerary, Marshall issued a sharp rebuke. "Our concern," he wrote, "is not over who receives credit…but solely the fact that a secret so dangerous to our interests should be publically disclosed."

The most serious threat to the security of Magic appeared in the most unlikely of places: the 1944 Presidential campaign. The Republican candidate, Governor Thomas Dewey, of New York, had learned of the codebreaking success against the Japanese before Pearl Harbor and was on the verge of using this information against Roosevelt by suggesting that the President had been negligent in not providing Kimmel and Short with the intelligence coming from Purple decrypts.

Marshall became aware of Dewey's intent and realized the danger that disclosure of the Magic secret would pose to military operations. However, Marshall also knew that, if he informed Roosevelt of what he had learned, he would create at least the appearance of interfering with the election, potentially compromising the military's non-partisanship and his personal reputation for being above politics. Accordingly, without telling the President, Marshall wrote a personal letter to Dewey. Swearing the Republican candidate to secrecy, Marshall laid out why revelation of America's codebreaking capability would prove fatal to its military efforts. He noted its past success at supporting the operations of the Army and the Navy. He also pointed

photo credit: George C. Marshall Research Library

Gen. Marshall persuaded Gov. Thomas Dewey, then a candidate for president in 1944, to maintain the secrecy of U.S. efforts to break the Japanese "Magic" code.

out how codebreaking was crucial to the campaigns of Admiral Nimitz in the Pacific and General Eisenhower in Europe that were then underway.

It took two attempts—initially, Dewey rebuffed the officer Marshall had sent to deliver the letter, refusing to open it when he learned that Marshall was asking him not to divulge its contents—but Dewey finally read Marshall's letter. He apparently said little to the aide at the time. Ultimately, however, the letter had the effect Marshall intended. Dewey remained silent, and the security of American codebreaking efforts remained intact. The secret of the codebreakers' "magic" was protected through the end of the war and was disclosed for the first time in 1946 during public hearings of a Congressional committee investigating Pearl Harbor. The British were even more successful, protecting Bletchley Park and Ultra until the 1970s.

This act began what was unquestionably the strongest alliance in history between intelligence services of two nations...

Codebreaking was only one of the many capabilities that the Allies would need to win the war. Marshall would have deemed it a secondary consideration when compared to the tasks he faced in mobilizing, training, and equipping an army that ultimately would number in the millions. Questions of grand strategy also were clearly of far higher importance. Marshall's insight, however, was that codebreaking was not just a way to penetrate the innermost secrets of Nazi Germany and Imperial Japan. He recognized that it also was a strategic asset, one that had to be managed carefully not just to maintain the military advantages it provided but also to preserve the alliance with Great Britain. In this way, Marshall not only protected a capability that—as he wrote to Governor Dewey—would "contribute greatly to the victory and tremendously to the saving of American lives, both in the conduct of current operations and in looking towards the early termination of the war." He also a played a critical role, one that only a leader in his position could, in ensuring the emergent intelligence partnership with Great Britain did not prove stillborn—as it easily could have, given the inevitable tensions that arose between the two nations when trying to conduct joint operations in secret—but flourished and was sustained through the coming conflict with the Soviet Union.

David Sherman heads the National Security Agency's strategy, policy and planning efforts. The views expressed are his own and do not reflect those of the U.S. Government. Dr. Sherman was instrumental in affecting the transfer of William Friedman's professional papers to the Marshall Foundation (available online) and for coordinating that transfer in the form of a day-long symposium to highlight the work of William and Elizebeth Friedman and codebreaking to kick off the Marshall Legacy Series in April 2014.

photo credit: George C. Marshall Research Library

World War I was a proving ground for American soldiers, and even more so for their officers.

George C. Marshall in World War I

BY EDWARD G. LENGEL, PH.D.

The impact of U.S. involvement in the First World War has been and continues to be heavily debated. European historians have typically treated American military participation as a sideshow; by contrast, historians from the United States have at times argued that the American Expeditionary Forces saved France from German occupation. The intensity of American participation, however brief, is in any case irrefutable. In barely six months of significant combat, American forces suffered over 53,000 combat deaths and over 200,000 other casualties—roughly equal to combat in Korea or Vietnam over several years.

photo credit: George C. Marshall Research Library

George C. Marshall at AEF headquarters during World War I

Unpreparedness is a defining characteristic of American participation in the war. The AEF was not remotely ready, in training or equipment, for combat on a large scale, and this is one of the reasons why it suffered such disproportionately heavy casualties in such a short period of time at the front. Unpreparedness went right to the top of the AEF hierarchy; Pershing and many of his generals had little understanding of the demands of modern war or how to face them effectively. Distrust of French and British methods exacerbated this problem. Instead of putting aside their own prejudices in favor of learning from their allies' mistakes—which were legion—and from their positive innovations—which also were many—American officers allowed suspicion and national pride to blind them to approaches that might have saved thousands of lives.

George C. Marshall's experiences in the First World War both reflected AEF shortcomings and highlighted his unique qualities as a leader. Like his fellow American officers, he was hypersensitive to European criticism and prone, at least initially, to react emotionally to perceived slights rather than admit how much he, as an inexperienced soldier, had to learn. Unlike many others, however, Marshall demonstrated a ready ability to rise above ingrained prejudices, embrace the realities of the modern battlefield, and adapt accordingly. A few episodes from 1917-1918 highlight these qualities in his character and anticipate his bright future.

This article is a summary of the author's Marshall Legacy Series kickoff talk for *The World Wars* sequence that he delivered at the Marshall Foundation in January 2017.

photo credit George C. Marshall Research Library

Troop and equipment movement on foot and by horse-drawn wagon on dirt roads made Marshall's repositioning for the Meuse-Argonne offensive a remarkable accomplishment.

The U.S. 1st Division was the first full-strength American division to arrive on the Western Front, in the fall of 1917. On October 6 the formation began making arrangements with the French 18th Division for a ten-day tour of the front lines in the Sommerville sector of Lorraine, about ten kilometers northeast of Nancy. The first elements of the division entered the sector on October 20, and three days later the Americans officially entered the front lines. Colonel Beaumont Bonaparte Buck, commanding the 28th Infantry Regiment, sneered at the French tactics he witnessed there, and looked forward "with an exultant feeling" to pushing "the enemy out of the trenches and force the fighting into the open. It was my opinion . . . that in no other way could the war be won."

But the Americans had much to learn. On the night of November 2-3, Company F of the 16th Regiment occupied trenches rimming a treeless hill that overlooked the Rhine-Marne canal in front of the town of Bathelémont. It was a vulnerable position and the Germans chose to test it. At 0300 in the morning a sudden German artillery barrage stunned the defenders. "I saw a wall of fire rear itself in the fog and darkness," remembered Sergeant Ed Halyburton.

> *Extending to right and left a couple of hundred yards, it moved upon us with a roar, above which I could not hear my own voice. The earth shuddered. The mist rolled and danced. Sections of the trench began to give way. Then the explosives were falling all around me. The air was filled with mud, water, pieces of duckboard and shell splinters.*

A shell blast knocked Halyburton to the ground while attacking Germans blew up the protective wire with Bangalore torpedoes and rushed forward. The Germans swooped upon the wrecked American trenches, deftly employing pistols and grenades. One of them knocked out Halyburton with a blow to the head. When he recovered consciousness, two Germans pinioned him while a third searched his pockets. A German officer stood nearby, "smoking a cigar and viewing the operations of the raiders with satisfaction."

The raiders departed after a few minutes, carrying off a dozen prisoners and leaving behind five wounded and three dead Americans. German losses were insignificant. In all, the raid had been a complete success for the Germans—who would soon publicize their catch—and a minor disaster for the Americans.

After daybreak, Captain George C. Marshall, the division's Operations Officer, prepared to set out from headquarters to inspect the troops in the line. The French 18th divisional commander, General Paul Bordeaux, stopped the American car before it could leave headquarters, telling Marshall he had reports of the war's first American fatalities.

Deeply concerned, Marshall rushed forward to the American battalion headquarters in a stone quarry. The battalion commander knew nothing about the raid and refused to accompany Marshall to the front. Accompanied by his interpreter/liaison officer and Bordeaux, Marshall raced along a communication trench. The officers dodged enemy sniper fire that Marshall called "beautiful target shooting" and arrived in the front line trench. Marshall followed the trench until he came to a place where it had caved in:

> *I remember climbing up on top of the trench. Everything was very quiet. No Man's Land was about half a mile wide there and I got up on top and here down below me, just a little to my right front, was the blasted gap in the wire which was about sixty yards wide there. The white tape to guide the raiding party that night through the wire leading up to the front trench—here was the scene of the raid—no question about it now. We had a hard time to get up to the part of the trench which this tape came in and where the defenders had been surprised. And we went down into this dugout—where there was quite a bit of blood about—where some had been killed or wounded—and then we came up and found the dead on the ground and the wounded had gone back.*

photo credit: George C. Marshall Research Library

AEF Gen. John J. Pershing and LTC George C. Marshall (right)

Afterwards, while Marshall was questioning some of the wounded, his interpreter hissed in his ear that the French general was questioning whether the Americans had "showed fight." Furious, Marshall turned to the general and declared:

> *General, I understand you are trying to find whether the Americans showed fight or not. I don't think there is any necessity for your questioning that—they had been surprised and they probably put up a disordered fight. Most of them were trapped in a dugout. But I don't think that is the thing to investigate. I think it would be very much more to the point if you look into the fact that you forbade the Americans to go beyond the wire in any reconnaissance and now they are surprised by the assault right through the wire. I think General Pershing is going to be very much interested in that reaction of a French commander to American troops.*

The upstart captain's feisty tirade evidently silenced the general, who became "very stiff." Still annoyed, Marshall decided to submit his report to the French Corps commander in addition to his own boss, 1st Division Major General William L. Sibert. Alerted to Marshall's plan, Bordeaux summoned Marshall to headquarters and told him not to go. "You are a very young officer," he chided, "and this is a very serious matter." Marshall wouldn't back down, but barked, "That's the reason I am going there. It is a very serious matter and I am representing the division commander." The French corps chief of staff then arrived and, agitated, asked Marshall "not to embarrass the corps commander at this particular moment." Marshall relented, but said he "would

photo credit: George C. Marshall Research Library

World War I was an artillery war.

have to go ahead and report this to General Sibert and I was going to say this because it is a very, very serious matter and I don't have to be a general to see that. I said I wish you would tell your corps commander so he can interest himself in it right away." "We had," Marshall remembered, "quite a scene there."

Official ceremony helped to paper over these differences. The three dead soldiers—the first Americans killed by hostile action after the United States officially entered the war—were buried the next day in Bathelémont—which Marshall called "just a crossroad and a manure pile" with "a haystack or two around"—with full honors. To Marshall's surprise, General Bordeaux gave "a very beautiful talk," calling for their graves to lie under a permanent monument. Marshall was so delighted with the general's speech that he had it transcribed and widely published.

Public protestations of fellowship notwithstanding, this minor affair exposed simmering tensions in the coalition. Shortly afterwards, Major Theodore Roosevelt, Jr. of the 26th Regiment and his brother Lieutenant Archie Roosevelt attempted to lead a retaliatory raid against the Germans. The attack went forward despite initial French opposition, but Archie and his French advisor began arguing as soon as they left the trenches. Their dispute soon became "quite acrimonious," and they had to turn back. "What Theodore said to me at this time about the French," Marshall remembered, "will not bear repeating."

Marshall's organizational ability continued to win him plaudits as well as additional responsibilities. In late May he was given authority to help plan the assault on the town of Cantigny. The product of his labors, issued on May 20, was F.O. 18, "Operation Against Cantigny." Despite ongoing tensions and concerns about working with the French, he carefully integrated French tanks and engineers into the assault plans. Marshall's tactics too were very much in the European mold, showing that he understood the value of lessons learned by America's allies. Launched on May 28, the attack encountered obstacles and accomplished little of lasting tactical—let alone strategic—value, but it was on the whole a complete success.

Four months later, after the creation of the First U.S. Army and just before its initial assault against the German-held St. Mihiel salient (which he also helped to plan), Marshall—by then a colonel—was ordered to plan the transfer of the bulk of the American army to the Meuse-Argonne sector for a major offensive. Overwhelmed by the prospect, Marshall left headquarters

and walked to a nearby canal where he spotted an elderly French fisherman, one of those who "forever line the banks of the canals and apparently never get a bite." Marshall sat beside the man and silently watched him until the American's mind settled into "a more philosophical mood." Returning to headquarters, he remarked to himself that "the only way to begin is to commence" and got to work.

photo credit: George C. Marshall Research Library

Trench warfare was a harsh reality that Marshall used to inform a revised curriculum on battlefield tactics he developed later at Fort Benning.

The result, according to Pershing, was "a fine piece of work" that moved U.S. forces from the St. Mihiel salient—in the immediate aftermath of the battle—to the Meuse-Argonne in stages beginning with artillery and ending with front-line infantry. "I often wonder," Marshall later remembered, "how in the world the concentration was ever put through in the face of so many complications." But it worked. Fifteen divisions about sixty miles in just under two weeks, without the Germans noticing, and in time for the offensive—the largest American attack of the entire war—to begin on September 26.

The Meuse-Argonne offensive turned out to be a brutal slog that left over 25,000 Americans dead, mostly in the first three weeks. Demoralization in some sectors of the AEF became acute. Marshall, however, watched events from headquarters and indeed studied them intensively with a view to innovating where he could. One of the shortcomings he noticed was the lack of effective communications from the front. As a temporary "experiment," he gathered up several restless junior officers at headquarters, provided each one with a cage full of carrier pigeons, and sent them to the front with orders to accompany the assault battalions and release pigeons regularly to keep army headquarters informed of what was happening. The officers were kept entertained, and headquarters was kept better informed.

World War I was a proving ground for American soldiers, and even more so for their officers. Few acquired more learning or put it to better use than Marshall. His contribution, especially in arranging troop movements and battle planning, had been distinguished. Even more, he learned from the deficiencies of the AEF in unpreparedness and administrative disarray, noting how this translated to lost lives on the battlefield. Twenty-five years after that war ended, he would put those lessons to work in a new environment, with auspicious results.

Ed Lengel, Ph.D., formerly on the faculty at the Univ. of Virginia, is a WWI scholar and the author of *Thunder and Flames: Americans in the Crucible of Combat* and *To Conquer Hell: The Meuse-Argonne, 1918*. Currently he serves as chief historian at the White House Historical Association.

His article includes material he covered in his talk, "Testing the American Way of War: Doughboys in Combat, 1917-1918," to open *The World Wars* sequence of the Marshall Legacy Series in January. You can see it on our YouTube channel.

MARSHALL SHORTS

photo credit: George C. Marshall Research Library

Marshall's barber Joseph Abbate reviews his wall of fame photos of important men whose hair he had cut.

MARSHALL AND HIS BARBER

By Cara Cook Sonnier

When Joseph Abbate opened his barber shop in the Pentagon in 1943, he hung photos of many famous customers including Eisenhower, Kennedy and MacArthur. Rank had its privilege at the shop, and generals could come in at any time and be served immediately. However, Marshall requested Mr. Abbate, who had been Marshall's barber since 1939, come to a small anteroom outside his office for his haircuts.

This situation gave the men time to get to know each other. In 1944, Abbate and his wife gave birth to their third child, a boy. They named him George Marshall Abbate. Marshall sent a congratulatory letter, writing, "although I should be interested in his progress in any case, the fact that you have honored me by giving him my name will cause me to follow his development with a very special interest."

George Marshall Abbate and his wife, Nancy, visited the Marshall Library recently to read correspondence between his father and Marshall. One letter from Abbate's mother mentioned how his namesake was a very attentive child and resembled the General in certain mannerisms.

George Marshall Abbate wrote to the library staff, "We both thoroughly enjoyed seeing the many letters and photos you have on file concerning my father's relationship with General Marshall. I am still blown away by the fact you had a letter my mother had sent to Gen. Marshall in 1947. The copy you provided me is the only document I now have of my mother's hand writing."

photo credit: George C. Marshall Research Library

Library Subject Guides embrace WWI and WWII leaders such as (left to right) Gen. John J. Pershing, Winston Churchill, Dwight D. Eisenhower and Harry Truman.

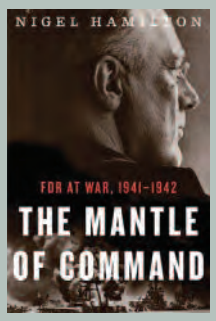
NEW SUBJECT GUIDES FEATURE LEADERS FROM THE WORLD WARS

By Cara Cook Sonnier

Librarians create subject guides to assist researchers in locating resources pertaining to a specific topic. These lists created by the Marshall Research Library may include links to books, digital documents, microfilm, oral histories, photographs, posters and videos, all of which are contained in the extensive Marshall Archives. Many of these lists or subject guides have been produced to coincide with topics presented during the Marshall Legacy Series now in its third year. They can be found on the website and include subjects such as the Women's Auxiliary Corp, African-American soldiers, the atomic bomb, codebreaking, taking care of the troops, weapons of war and the homefront effort during WWII.

Recent guide additions include individuals who were important to both World War I and World War II. They were created to provide resources to accompany the newest museum exhibition, "Six Degrees of Marshall," as well as to assist researchers who seek information about these prominent and well-known personalities. Researchers can now access information easily about Pershing, Eisenhower, Patton, Churchill, Bradley, Fox Conner, Walter Bedell Smith, Henry Stimson, Woodrow Wilson and others.

The subject guides can be found on the Marshall Foundation's website: http://marshallfoundation.org/library/collection/subject-guides/. Not all the resources in the archives have been digitized in this fashion and may not be available online. Researchers looking for more information about a topic should contact the library staff or submit a research request. The research library is pleased to offer patrons 60 minutes of reference assistance free of charge.

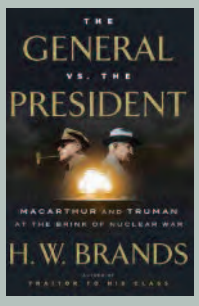


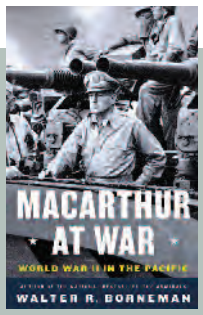
BEST NEW BOOKS ABOUT OR INCLUDING MARSHALL

MacArthur at War: World War II in the Pacific (Little Brown) **by Walter R. Borneman**

The General vs. the President: MacArthur and Truman at the Brink of Nuclear War (Penguin Random House) **by H.W. Brands**

The Mantle of Command: FDR at War, 1941–1942 (Houghton Mifflin Harcourt) **by Nigel Hamilton**





Legacy Series Focuses on *The World Wars*

Visitors can trace intriguing connections between Marshall and other leaders in WWI and WWII shown in the "Six Degrees of Marshall" exhibition.

photo credit: George C. Marshall Research Library

"Of all the military lessons which could have been learned from the last war, the question of unity of command is probably the most outstanding; personally I learned my lesson in observing the problems of General Pershing in France and the reluctance of our Allies to meet the issue until almost overwhelmed by the great German offensive of March, 1918. For that reason the first step taken by the Chiefs of Staff of Great Britain and the United States at the initial meeting in Washington in December, 1941, was to establish a basis of procedure to secure coordinated action."

—General George C. Marshall, 1942

photo credit: George C. Marshall Research Library

Renowned World War I historian and author Ed Lengel, Ph.D., opened the new sequence in January that focuses on *The World Wars*. The sequence and the exhibition, "Six Degrees of Marshall," run through December.

His talk, "Testing the American Way of War: Doughboys in Combat, 1917-1918," can be viewed on our YouTube channel. Dr. Lengel discussed the first American military engagements of WWI, describing how unpreparedness and bravery—as witnessed first hand by George C. Marshall and others—defined the

photo credit: George C. Marshall Research Library

Marshall's connection to many leaders during World War II began during the first World War.

introduction of millions of Doughboys to the challenges of modern mechanized warfare. He addressed how the Franco-American alliance was put to perhaps its greatest test, before or since—a test in which Marshall was a direct and primary participant.

Dr. Lengel, formerly on the faculty at the Univ. of Virginia, is chief historian at the White House Historical Association and the author of *Thunder and Flames: Americans in the Crucible of Combat and To Conquer Hell: The Meuse-Argonne, 1918*. Read his feature that begins on page 22 of this issue.

The new exhibition, "Six Degrees of Marshall," uses an infographic to connect Marshall to people and programs important to World War I and World War II. Looking like a subway map with colored lines representing themed connections, the exhibition positions Marshall at the heart of events and relationships beginning with those in World War I and concluding with those, including "Marshall's Men," in World War II.

Visitors will appreciate how Marshall both shaped, and was shaped by, the experience of combat in France during World War I as a member of the American Expeditionary Force under Gen. John J. Pershing and at the right hand of operations head, Gen. Fox Conner. The lessons Marshall learned in 1917 and 1918 would ultimately influence the decisions he made as Army Chief of Staff and advisor to two presidents regarding unity of command, military strategy, battlefield tactics and leadership, and allied warfare during World War II.

The individuals who led in World War II in addition to Marshall—Patton, MacArthur, Churchill, Roosevelt, Truman, Stimson, among others—were involved in World War I. They are featured in the exhibition and are connected to Marshall in one fashion or another through the themes: World War I, St. Mihiel-Argonne, Cantigny, Technology (Jeep, Atomic Bomb, Tank Destroyer), Marshall's Men, D-Day and World War II. Their direct involvement in the first war informed their leadership and the decisions they made in the second, and Marshall, in particular, evolved from a battle planner and logistics genius into a global military strategist drawing on the knowledge and experience of coalition warfare and fighting on a global scale.

Legacy Series SCHEDULE

The World Wars
Jan—Dec 2017

April 27
"Myths of World War II" panel featuring Mark Stoler, Conrad Crane & Michael Adams

May 11
Nigel Hamilton: "Marshall and the President, 1943"

June 10
"Profiles of Honor" van visits

June 17
"General Marshall & Private Martin" Dr. Brad Coleman & D-Day veteran "Pee Wee" Martin discuss D-Day

July 20
Dr. Steve Taaffe: *Marshall and His Generals*

August 17
"Marshall's Men" Behind-the-Scenes event featuring items from the collection

To see the lineup for the rest of the Marshall Legacy Series, go to our website.

the last word

"The best efforts of Malin Craig, when he was Chief of Staff, the ups and downs of Secretary Woodring's understanding, never changed the basic conviction of the Department that allocation of the skimpy funds it had for the purchase of airplanes should be put into medium bombers and other ground-support planes. Even when George Marshall first took over in 1937, he needed plenty of indoctrination about the air facts of life. The difference in George, who presently was to become one of the most potent forces behind the development of a real American air power, was his ability to digest what he saw and make it part of as strong a body of military genius as I have ever known."

photo credit: George C. Marshall Research Library

—General Henry H. "Hap" Arnold
Writing in his biography, *Global Mission*,
published in 1949

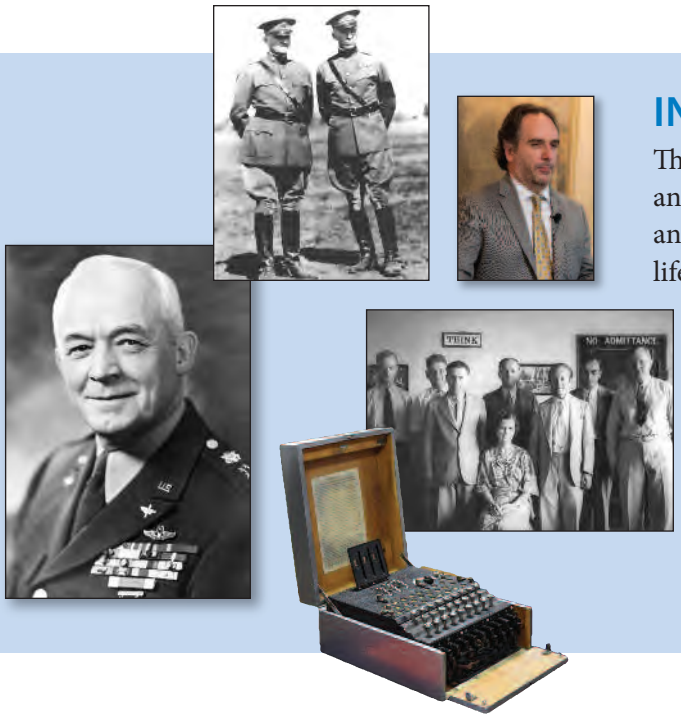
By renewing your membership, you help us perpetuate the legacy of the man President Harry Truman called "the great one of the age." As the keeper of the flame, the Marshall Foundation preserves and communicates the remarkable story of the life and times of George C. Marshall and his contemporaries. It has become a unique, national treasure worth protecting at all costs. That's why your membership is so important.

KEEP MARSHALL'S LEGACY ALIVE

Benefits of Membership	Levels of Membership							
	Friend	Associate	Colleague	Supporter	Partner	Leader	Visionary	Strategist
An annual contribution of at least:	$75 individual	$150 couple	$250	$500	$1,000	$2,500	$5,000	$10,000
Free admission to Museum during the membership year	★	★	★	★	★	★	★	★
New members receive a Five-Star lapel pin	★	★	★	★	★	★	★	★
Receive the newsletter, *The Strategist*	★	★	★	★	★	★	★	★
Free admission to most Legacy Series events	★	★	★	★	★	★	★	★
Receive two issues of our magazine, *MARSHALL*	★	★	★	★	★	★	★	★
Receive 10% discount in the Museum Shop	★	★	★	★	★	★	★	★
Reciprocal admission to 750 NARM-member museums		★	★	★	★	★	★	★
New members receive *The Words of George C. Marshall*			★	★	★	★	★	★
Receive a private tour of the Archives					★	★	★	★
Receive a table at a Foundation award event								★

Marshall received this Nobel Peace Prize in 1953. It's on display in our museum.

GCMF THE GEORGE C. MARSHALL FOUNDATION



INSIDE THIS ISSUE

This magazine, in tandem with our Marshall Legacy Series and other initiatives, brings Marshall to life substantially and in a fashion that does justice to the complexities of his life, character and career.