STRATEGY
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GEORGE CATLETT MARSHALL, FATHER OF THE UNITED STATES AIR FORCE: HIS CONTRIBUTIONS TO AIR POWER

BY

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George Catlett Marshall, Father of the United States Air Force: His contributions to Air Power

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ABSTRACT

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This paper explores George Catlett Marshall's contributions to the development of air power in the United States. Although Marshall began learning about airpower in 1907 and continued through the First World War and interwar years, it is because of his vast contributions to air development from 1938 to 1945 that he can be considered one of the founding fathers of the USAF. Marshall's most concentrated airpower education came in 1938 when Major General Frank Andrews, commanding general of the GHQ Air Force, accompanied him on an 8,000-mile trip in nine days. The Air Corps greatly benefited also from the personal relationship between Marshall and General "Hap" Arnold. Marshall learned much from air officers, but he taught the Army Air Force (AAF) even more as he successfully built the best air force in the world from only 62 tactical squadrons in 1939. He assisted the AAF by correcting personnel and aircraft procurement problems, along with implementing doctrinal changes on the way the Army fights. Marshall left a legacy of valuable lessons of jointness, mentorship, lifelong professional learning, vision, and the importance of relationships.

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I undertook this Strategy Research Project on General George Catlett Marshall as a result of the inspiration I received from Colonel Gregory Martin, my Course One faculty instructor and overall faculty advisor. From the concepts I learned in the first month of attendance at the United States Army War College in the course titled "Strategic Leadership," I accepted the challenge to examine General Marshall. From this analysis, I came to the conclusion that few in the United States military understand the impact of Marshall's leadership on air power development during World War II, subsequence service independence in 1947, and its future success. I am thankful to the many people who offered me their views and recommendations on this project. First and foremost my thanks goes to Dr. Conrad Crane, my project advisor, who offered me tremendous insight and encouragement throughout the research and writing of this project. In addition, the Army War College Historical Research Center provided me all the assistance required, as I became a daily addition to their library. My special thanks goes to Major General Jack Houston, USAF Retired, who answered numerous questions I had and along with his wife, invited me down for an afternoon to discuss many issues personally. Also, I thank the United States Army War College for providing this airman a chance to learn and grow during the past year. Finally, I must thank my wife Laura, whose editorial comments, proofreading, and encouragement kept me focused throughout.

GEORGE CATLETT MARSHALL, FATHER OF THE UNITED STATES AIR FORCE: HIS CONTRIBUTIONS TO AIR POWER

George Catlett Marshall's contributions to the development of United States air power have been overlooked, even though he has been credited with many other achievements. He earned the rank of General of the Army for his contributions to the Allied success in World War II. As chief architect of the Marshall Plan to rebuild post-war Western Europe, he was awarded the Nobel Peace Prize. Marshall doesn't need any more personal tributes.[1] However, it is important for members of the United States military, especially the Air Force (USAF), to realize that an influential leader other than an air advocate had a great impact on its future. Ask any of today's airmen who they believe had the most influence on the development of the USAF, and most will answer Hap Arnold, Carl Spaatz, Billy Mitchell, or Benjamin Foulois. Although Marshall usually is not mentioned in such company and was not an airman, he should still be given much credit for the development of American airpower and USAF independence.

Marshall deserves to be considered one of the founding fathers of the USAF because of his vast contributions to the development of air power from 1938 to 1945. Initially, Marshall was educated about air development by his friend Lieutenant Benjamin Foulois. During World War I, Marshall added to his air knowledge through his experiences fighting the Germans in France. Marshall supported the development of airpower, first through the Army Air Corps (AAC) and later through the Army Air Forces (AAF), from his arrival in Washington in 1938 through the end of World War II. The Air Corps benefited greatly from the personal relationship of Marshall and General "Hap" Arnold, the ACC Commanding General. His most concentrated airpower education came in 1938, when Major General Frank Andrews, commanding general of the GHQ Air Force, accompanied him on an 8,000-mile trip in nine days. They toured numerous airbases and aircraft production facilities, where Marshall was personally informed of air corps issues. At this time, Marshall was advising president Franklin D. Roosevelt on a strategy to counter German aggression by both land and air means.

While he was Army Chief of Staff, Marshall traveled extensively and continued to visit AAF bases and related civilian industries over the following six years. Marshall thus learned much from air officers. But he taught the AAF even more as he successfully built the best air force in the world, starting with only 62 tactical squadrons in 1939.[2] Marshall set out to teach airmen the importance of balance between the air and ground components in a military force, first by challenging the Air Corps Tactical School (ACTS) faculty and students to consider issues of force structure. He then assisted the AAF by correcting personnel and aircraft procurement

problems, along with promoting doctrinal changes to incorporate air warfare into the Army's warfighting doctrine. Through his mentorship of young AAF officers, he developed the future leadership of the USAF. Marshall's legacy furnishes valuable lessons that can be applied today.

MARSHALL'S BIOGRAPHY

George Catlett Marshall was born 31 December 1880 in Uniontown, Pennsylvania.[3] He graduated from the Virginia Military Institute in 1901 and was commissioned a Second Lieutenant of Infantry in February 1902. In his early military career, Marshall served in the Philippine Islands; Fort Reno, Oklahoma; and Fort Leavenworth, Kansas. During this period, he graduated from both the Infantry and Cavalry Schools, as well as the Staff College located at Fort Leavenworth, where he remained as an instructor until 1910. From 1910 to 1916 Marshall held assignments in Massachusetts, Minnesota, Texas, and the Philippines. During World War I, Marshall served in many positions in the American Expeditionary Force in Division, Corps, and General Headquarters, mostly in G-3 Operations. He concluded his World War I service as the Aide-de-Camp to General John J. Pershing and remained his special assistant until 1924. After this staff duty, Marshall was reassigned to the Fifteenth Infantry in China. In 1927, Marshall was an instructor at the Army War College before being sent to Fort Benning, Georgia, where he served as the Assistant Commandant of the Infantry School until 1932. From 1933 to 1938, Marshall commanded various districts of the Civilian Conservation Corps in Georgia, South Carolina, and Washington State; he also served as a senior instructor with the Illinois National Guard. He was promoted to Colonel in 1933 and to Brigadier General in 1936. In 1938, he returned to Washington and served as the Assistant Chief of Staff in the War Plans Division and Deputy Chief of Staff in the War Department. He began his duties as the Chief of Staff of the Army in 1939. During World War II, Marshall was instrumental in the planning and execution of the Allied strategy to defeat Germany and Japan, and he was promoted to General of the Army in 1944. After World War II, Marshall began his role as statesman, serving as President Truman's Special Envoy to China, Secretary of State, and Secretary of Defense. He left public office in 1951. During the last eight years of his life, he was the Chairman of the American Battle Monuments Commission, whose mission was to honor those who fell during World War II. Marshall died on 16 October 1959, at the age of 78.

MARSHALL'S EARLY AIR POWER EXPERIENCES

On 30 July 1909, Lieutenant George C. Marshall finished his instructor's duties with the Pennsylvania National Guard and remained overnight with his friend, First Lieutenant Benjamin Foulois at Ft Myer, Virginia, before continuing home.[4] Foulois, who later became the Chief of the Air Corps in 1931, was involved in testing and evaluation of the Wright Brothers' aircraft for future Army aircraft procurement.[5] When Marshall arrived at Fort Myer, he found thousands of people present (including many diplomats and government officials) to see Orville Wright and Foulois fly an aircraft 20 miles.[6] Marshall first heard of flight by a heavier-than-air machine while a student at General Staff School in 1907. He attended a lecture by Major George Squier, head of the Army Signal School, where he began to understand the true significance of flight. This lecture and his personal viewing of the Wright/Foulois flight left Marshall with a profound impression of aviation.[7]

During World War I, Marshall built on these early observations of airpower.[8] In his diary Marshall noted his observations of French aviators arriving, departing, flying loops, and executing other acrobatic maneuvers.[9] Marshall began to realize airpower's devastating potential when German airplanes killed the First Division Quartermaster and two other officers in 1918.[10] Although aviation was then regarded as strictly a supporting arm, German aviators were also able to destroy the largest ammunition dump in the La Courtine area north of Toul because it was poorly concealed. It had taken weeks to build this dump, which contained thousands of tons of ammunition.[11] On the last day of the war, Marshall was almost killed by a bomb dropped alongside the mess hall while he was sitting at a table philosophizing about what should happen to Germany. The force of the explosion threw Marshall from his chair so hard that he thought he was dead. An American pilot rushed into the room and announced that he had released a small bomb stuck in his bomb rack over the building as he approached for a landing. This was a tough way to learn about a new method of warfare only 30 minutes before the Armistice was to take effect.[12] Marshall later humorously related that his being in the right place at the right time enabled him to witness the birth and emergence of the Air Corps.[13]

PERSONAL RELATIONSHIPS BETWEEN ARNOLD AND MARSHALL

A deep, trusting interpersonal relationship with General Hap Arnold pushed Marshall's understanding of air power and deepened his commitment to integrate it into the Army while also giving it some autonomy. Arnold claims that it was not until Marshall became the Deputy Chief of Staff that the War Department developed a real air corps program.[14] Arnold

enthusiastically endorsed Marshall's place in the development of United States air power in his autobiography: "It is hard to think how there could have been any American Air Force in World War II without him."[15] Arnold first met Marshall during maneuvers in the Philippines in 1914. There, Lieutenant Arnold met the acting Chief of Staff for their side of the maneuvers, Lieutenant Marshall. Arnold credited Marshall's planning and execution during these maneuvers as the key reason for their success. When Arnold returned home from the maneuvers, he told his wife that he met the man who would be the future Chief of Staff of the Army.[16]

Through a busy correspondence, a personal relationship evolved. Letters from Arnold to Marshall often began "Dear George," while letters from Marshall to Arnold were addressed to "My Dear Hap".[17] Arnold introduced Marshall to many people interested in aviation, including aircraft manufacturers. When the United States was undergoing an aluminum shortage in 1940, mainly due to German submarine warfare, that severely hampered aircraft production, Arnold planned a goose-hunting trip with aircraft manufacturer Glenn Martin and invited Marshall along. During the trip, Arnold and Martin invited Marshall to tour Martin's new plant north of Baltimore. At the plant, Marshall saw numerous machines idle because of the aluminum shortage. Upon his return from the hunting trip, Marshall told those who were responsible for aluminum production to find ways to increase it. Arnold understood that when Marshall requested something, his initiative and influence had more impact than if Arnold had asked for it himself.[18] Marshall understood the seriousness of issues like the aluminum shortage and acted to make changes everywhere he could, and the infantile Air Force gained through his keen insights and forthright support.

Arnold also introduced Marshall to scientists who were involved in research and development of aircraft. Shortly after Marshall became the Chief of Staff, Arnold invited him to lunch with such scientists as Dr Robert Millikan, President of Cal Tech, and Karl Compton from Massachusetts Institute of Technology. Arnold pointed out in his autobiography Global Mission that few high-ranking officers in the War Department was aware of the growing relationship between scientists and the Air Corps.[19] This amazed Marshall. Asked by Marshall what the Air Corps was doing with these people, Arnold answered, "using their brains to help us develop gadgets and devices for our airplanes…too difficult for our Air Force engineers to develop themselves."[20] With Marshall's approval, other senior Army officers also supported Arnold in his constant quest for advanced aviation technology.[21]

For Marshall, Arnold was a loyal subordinate and constant companion. Their offices were next to each other in the Pentagon and they lived near each other at Fort Myer, Virginia.[22] They also went many places together, including trips with President Roosevelt, numerous hunting and fishing excursions, and other long aircraft flights around the world. Although only Marshall and Arnold know what was discussed, their friendship and mutual professional esteem certainly advanced air issues. Even on the sensitive issue of an independent Air Force, they agreed the Air Corps should stay in the Army, at least until World War II ended.

A zealous advocate group comprised of individuals in the Congress and media were promoting the concept of an independent Air Force in 1943. One member of this group was Alexander de Seversky, whose Victory through Air Power was touted by Congressmen and boosted through public book sales.[23] Walt Disney even produced a very popular cartoon film entitled *Victory Through Air Power.* Marshall remained firm in his belief in balance between the air and ground forces.[24] However, Marshall supported Arnold all he could to make him an equal on the Joint Chiefs of Staff: "I tried to make him as nearly as I could chief of staff of the air without any restraint, though he was my subordinate... I gave Arnold his head as much as I possibly could."[25] Even though they shared a close professional and personal relationship, Arnold and Marshall did not always agree on strategic issues. But Marshall did not hold Arnold's dissent against him, in fact he welcomed it. [26]

When Marshall was asked to list the five most critical decisions of World War II, he answered that one was giving an airman a place on the Joint Chiefs of Staff (JCS). The United States Navy did not want to recognize Arnold as an equal to their Chief of Naval Operations. They viewed him as just another general officer in the U. S. Army. However, Marshall realized that as critical as air power was to be in the war, the Navy should recognize him as an equal.[27] The initiative for Arnold becoming a member of the United States Joint Chiefs began during the Argentia Conference that took place in August 1941. Roosevelt, following Marshall's and Hopkins' recommendations, invited Arnold to this Conference. This was the second of nine conferences between the British and Americans on many war coordination issues throughout World War II. To achieve effective influence between the staffs, Marshall paralleled the United States structure to the British military command structure, which included an independent air service. Roosevelt approved this new command structure.[28]

MARSHALL'S AIR CORPS ORIENTATION

When Marshall arrived in Washington in 1938, he soon identified a problem between the ground forces and air forces in the War Department. It began in the 1920s when Brigadier General Billy Mitchell advocated an independent strategic bombing role for airmen, while ground officers saw the Army Air Corps (AAC) as a tactical and subordinate branch in support of ground troops.[29] Marshall's leadership changed Army attitudes toward airpower from 1938 to the end of World War II. Military leaders' increasing recognition of the importance of air warfare ultimately led to the creation of the USAF in 1947. But first Marshall had to receive a quick orientation on the current Air Corps in 1938 before he could go about changing attitudes and fostering a strategic environment receptive to the emerging role of air power in mid-twentieth-century warfare.

When Marshall was Assistant Chief of Staff of the Army, War Plans Division on the General Staff, during the summer of 1938, Major General Frank Andrews invited him on a trip. Andrews accompanied Marshall over 8000 air miles to educate him on the present status of the Army Air Corps and aircraft procurement. Andrews was selected to be the commander of General Headquarters Air Force (GHQ-AF) in 1935 and given the temporary rank of Major General.[30] GHQ-AF was responsible for the tactical air units. Although many people in the War Department were opposed to Marshall's trip, he wrote to Andrews that he was looking forward to "a bird's eye view of the present air set-up."[31] Consider their itinerary:[32]

Date (1938)	Location
9 August	Depart 0810 Bolling Field, DC
	Arrive 1100 and Depart 1155 Selfridge Field, MI
(Met Colonel Clagett, Commanding Officer of the Group and see the layout of the field)	
	Arrive 1355 and Depart 1600 Chanute Field, IL
	Arrive 1830 Minneapolis, MN
10 August	Depart 0850 Minneapolis, MN
	Arrive 1340 and Depart 1500 Billings, MT
	Arrive 1830 Spokane, WA
	(Visit 7th Bombardment Group)
11 August	Depart 0900 Spokane, WA
	Arrive 1100 Ft Lewis, WA
	(Witness bombardment demonstration)
12 August	Depart 1010 Ft Lewis, WA

	Arrive 1035 and Depart 1500 Seattle, WA
	(Visit Boeing Aircraft – B-17s produced there)
	Arrive 1605 Pearson Field, WA
	(Visit 17th Attack Group)
13 August	Depart 0910 Pearson Field, WA
	Arrive 1235 Hamilton Field, CA
14 August	Depart 0830 Hamilton Field, CA
	Arrive 0900 and Depart 0930 Moffett Field, CA
	Arrive 1140 March Field, CA
	(Visit Aircraft factories)
15 August	Depart 0845 March Field, CA
	Arrive 0925 and Depart 1100 Clover Field, CA
	Arrive 1110 and Depart 1245 Mines Field, CA
	Arrive 1600 and Depart 1745 Winslow, AZ
	Arrive 2100 Denver, CO
	(Visit new Air Corps Station being built)
16 August	Depart 1030 Denver, CO
	Arrive 1535 San Antonio, TX
	(Visit Air Corps Installations)
17 August	Depart 1430 San Antonio, TX
	Arrive 1645 Barksdale Field, LA
18 August	Depart 0915 Barksdale Field, LA
	Arrive 1210 and Depart 1350 Nashville, TN
	Arrive 1730 Bolling Field, DC

Marshall reported on his trip to General John Pershing shortly after his return: "Altogether I had a very interesting trip professionally and a most magnificent one personally."[33] Marshall later wrote to Andrews:

> Not that one can acquire an intimate knowledge of the Air Corps in nine days, but it gave me a perspective, as it were, against which I could sort the facts I collected during the following months. It was probably just as well that I knew so little at the time, rather than having started out with too many preconceived notions. However that may be, it was a thoroughly delightful and highly informative experience.[34]

On this trip, Marshall learned of construction problems with aircraft industries, a perceived lack of interest in the AAC from the War Department, lack of air representation on the general staff, and lack of training aircraft.[35] His trip with Andrews gave Marshall a great overview of AAC personnel and aircraft production issues that would serve him well as he coordinated and dealt with air matters with President Roosevelt as they prepared for World War II.

CREATION OF THE WORLD WAR II ARMY AIR FORCE

Before Marshall became the Deputy Chief of Staff of the Army, he attended a White House conference on 14 November 1938. Roosevelt wanted to discuss his plan to build 10,000 aircraft to develop air power to counter the German threat.[36] Also in attendance were General Malin Craig, Army Chief of Staff; Arnold; Secretary of Treasury Henry Morgenthau; Presidential advisor and confidant Harry Hopkins; Assistant Secretary of War Louis Johnson; and Solicitor of the Treasury Herman Oliphant. According to Oliphant's account of this meeting, the President outlined the aeronautic equipment needed and production capacity of present plants in the United States. Roosevelt pointed out that because of the rise of German air power, "For the first time since the Holy Alliance of 1818 the United States now faced the possibility of an attack on the Atlantic side in both the Northern and Southern Hemispheres."[37] The President was alarmed. He contended that the United States needed a large air force immediately, not a ground army. Roosevelt believed a large ground army was "undesirable and politically out of the question," and he felt a strong air force would deter an invasion in North or South America.

President Roosevelt was also concerned about how long it would take to field a force to counter German aggression. He emphasized that the American Expeditionary Force during World War I needed thirteen months after war was declared to put its first aircraft into battle. He did not want to make the mistake of being unprepared again to make the military a vital warfighting instrument. Marshall recollected that the President wanted aircraft, but not so much the men or munitions. These aircraft would be sent overseas to be used by England and France to support their war efforts.[38] But Marshall foresaw that although an American air force was needed, "if we did not have an army, and a ground army, we did not have anything. Therefore, the fight was on to maintain the ground army."[39] Marshall and Arnold, according to Oliphant, were not prepared for the President's plan to produce 10,000 aircraft per year with the capacity to produce 20,000 per year if they had to. When Roosevelt asked Marshall what he thought of his plan, Marshall told him he disagreed with the President's view. That ended the conference.[40] Marshall recalled that during the meeting most other participants agreed with the President entirely and added very little to what Roosevelt said. Many at the meeting said

farewell to Marshall, thinking his disagreement with Roosevelt would surely end his Washington assignment.

Roosevelt, however, did not hold Marshall's dissenting views against him personally.[41] On 23 April 1939, Roosevelt interviewed Marshall on becoming the Chief of Staff of the Army. Marshall told Roosevelt that he wanted to be able to speak his mind, even though sometimes his outspokenness would be unpalatable.[42] Roosevelt just smiled. On 1 September 1939, Marshall officially became the Chief of Staff of the Army.

Early in 1940, Marshall showed his appreciation for air power when the air staff proposed to increase their branch size to 54 air groups with over 5,000 aircraft, airfields, and associated supporting equipment and facilities. Marshall asked Major Laurence Kuter from the Air War Plans Division why 54 groups, why not 56 or 64 air groups?[43] Kuter replied that no one asked him that before, noting that 54 air groups was all the Air Corps could support at that time. Marshall approved the increase in air groups but still believed in a balance between all the forces.

When Germany's war machine easily rolled through Holland and Belgium, Morgenthau was interested in the Army's current budgetary problems and sought a proposal on the Army's total appropriations that Roosevelt, the Congress, and the American people could support. Morgenthau felt that the President was being sent piecemeal military appropriations and needed to see the larger plan.[44] Marshall and Morgenthau agreed that more than additional aircraft was needed. On 13 May 1940, Marshall, Morgenthau, Secretary of War Harry Woodring, and Assistant Secretary of War Louis Johnson discussed their appropriations plan with Roosevelt. Specifically, Marshall proposed the following:

- Expand the Regular Army to 280,000 by 30 September 1940.
- Mobilize 750,000 men (with equipment) by 31 December 1941.
- Appropriate $657 million appropriation to pay for the increase in regular forces and purchase needed items for the National Guard.[45]

Marshall and Morgenthau knew it would be difficult to gain approval for his proposal because Roosevelt and Johnson both wanted an unrealistic 50,000 aircraft production plan, while Woodring did not want any mobilization plan at all.[46] The meeting devolved into a series of disagreements as Roosevelt icily responded to the Marshall-Morgenthau proposal. As Roosevelt was ushering the participants out of his office, Marshall asked for three minutes with him. The President consented. Marshall did not mince words: "If you don't do something and do it right away, and really do it today, I don't know what is going to happen to this country."[47]

The President then asked Marshall to return the next day to discuss his plan further. Roosevelt was convinced of most of what Marshall advocated. FDR agreed to a supplemental appropriation of $1.8 billion, including funds to build a balanced army, appropriations for an additional 200 B-17 bombers, money to supply 1.25 million men on mobilization day, and an additional $250 million for the Navy. In short, Marshall's successful appeal to the President was instrumental in awakening a woefully unprepared nation to the realities of preparing for World War II.[48]

Roosevelt's desires for 50,000 aircraft emboldened young air power advocates in the Air Corps and Congress, who called Marshall's balanced approach between air and ground outdated.[49] Marshall did not oppose enlarging the Air Corps, but he had the foresight to understand that it would take more than bombers to defeat the Axis. He rightly predicted that it would take a large army to defeat Germany. Marshall outlined his proposal for a balanced force during a speech to the Air Corps Tactical School (ACTS), the bedrock of airpower advocacy. When General Craig, then Chief of Staff of the Army, was unable to address the ACTS students at Maxwell Field, Alabama, on 1 October 1938, Marshall took his place.[50]

ACTS's roots can be traced to the Air Service School, begun in 1920 at Langley Field, Virginia. The school concentrated on teaching air service officers tactics and techniques of the air service.[51] It became known as the Air Corps Tactical School in 1926 when the Air Service name was changed to the Air Corps. The teachings of the school were then broadened to cover not only air aspects of warfare, but also the tactics and techniques of the Army and Navy. Eventually, the school emphasized the importance of strategic bombardment. The school's teachings were based on two premises:

- Modern nations cannot continue to fight if their industries are destroyed.
- Aircraft can get through to their targets with bombs capable of bringing down a country's industry.[52]

The faculty promoted a doctrine of co-operation among the army, navy, and air forces to conduct successful modern military operations. However, air power should contribute to all missions.[53]

In his speech to the class, Marshall instructed the students that neither air, land, nor sea forces gain military victory exclusively. He advocated creation of a synergy of all these forces into one team.[54] In addition, aviators serving as higher-level staff officers needed knowledge of all combined arms, not just a single one. Because the United States' geographical position and

international situation made it difficult to anticipate with perfect clarity who the next enemy would be, it was important to maintain a balanced force:

> The most difficult problem for the War Department is the determination of the best organization for the Army, within the limits of the funds available. Fortunately, in some respects, we are not like European nations who clearly recognize potential enemies and therefore can plan for national defense along definite lines. The size and character of the military organizations that will best meet their special situations can be accurately determined.
>
> With us, geographical location and the international situation make it literally impossible to find definite answers for such operations as: who will be our enemy in the next war; in what theater of operations will that war be fought; and, what will be our national objective at that time? These uncertainties lead inevitably to the conclusion that the only sensible policy for us to follow is to maintain a conservatively balanced force for the protection of our territory against any probable threat during the period the vast but latent resources of the United States, in men and material, are being mobilized.[55]

Marshall continued that there were no perfect solutions for what this balanced force should be. Marshall challenged the students to look at the problem of balance by first divorcing themselves from the Air Corps, and then designing a structure of national defense within the limited defense budget. Then he told the students to develop an air force that met those requirements and to "be conservative as to the powers of aviation and honest to its limitations."[56] Marshall then listed many decisions required to arrive at a solution, including fully equipping aircraft with bombs, instruments, maintenance, production times, training of pilots, special characteristics, and research and development, among other factors. He told the class that these were not academic questions, but ones that were discussed daily in the War Department. Marshall then left this challenge to the students to discuss and debate: "I leave this problem with you. Please give it serious thought and contribute towards its solution, for it is my firm conviction that aerial supremacy in the next war will not be merely a matter of technical excellence and tactical skill, but will depend fundamentally on the soundness of our peacetime planning and preparations."[57]

To create this balanced force in the Army after he became Chief of Staff, Marshall directed the War Plans Division (WPD) in the War Department to plan for the inevitable war with Germany. On 9 July 1941, Roosevelt directed his Secretaries of War and Navy to determine the production requirements for the United States to defeat the Axis powers, later broadened to

include Lend-Lease in the requirement.[58] Marshall combined both taskings and directed the WPD to prepare a strategic estimate. Acting Chief of WPD, Brigadier General H. J. Maloney, selected Major Albert Wedemeyer, a recent graduate from the German War College, to write the "Victory Plan."[59] Wedemeyer had the support of the entire staff, including Major General Hap Arnold. Wedemeyer understood the importance of air power, but believed that air power could not win the war alone. The Air War Plans Division (AWPD), led by Colonel Hal George, assisted Wedemeyer in writing the plan. There was, however, a difference between these two divisions in their methodology for assessing enemy strength. AWPD estimated the number of aircraft needed to achieve the following tasks:

- Air offensive against Germany and Italy to destroy their will and capability to continue the war and make an invasion either unnecessary or feasible without excessive cost.
- Air operations in defense of the Western Hemisphere
- Air operations in support of Pacific operations
- Close and direct air support of surface forces in the invasion of the Continent and for major land campaign thereafter.[60]

Based on these tasks, AWPD-1, the title of the initial air plan to defeat Germany, extended the WPD's initial planning for air assets. The WPD assumed that the objective of the air force should be to defeat the enemy's air force and assist the army in defeating the enemy army.[61] AWPD-1 went further than strictly computing numbers needed to defeat the German Luftwaffe.

Another point of departure between these two planning groups was their difference over whether the air plan should be absorbed into the Army Plan. General Arnold supported the AWPD's proposal to keep the air plan separate and convinced Brigadier General Leonard Gerow, Chief of the WPD, that the ground plan was too massive to try and incorporate the air plan into it. Working for George at the AWPD were Majors Haywood Hansell, Laurence Kuter, and Kenneth Walker, all former ACTS instructors. Historians express amazement at their ability to quickly develop an acceptable plan: "A plan that should have been assembled by dozens of experts in a period of months was written by four young men in nine days while their boss was out of the country,"[62] Yet George and his team defended the plan to eight different audiences, among which the briefing to Marshall on 30 August 1941 was the most critical. Hansell recalled that the planners were most apprehensive briefing the Chief of Staff because he "was the one man in the War Department who could, with a gesture, dismiss the entire effort."[63] Although members of the War Department staff raised objections to the plan, Marshall accepted it as having merit and sent the plan to be briefed to Secretary of War Stimson, but not the Joint

Board. Marshall foresaw the Joint Army-Navy Board would not only refuse to endorse it, but would bring the entire strength of the Navy Department to discredit it because it would not accept the untried theory of victory through air power.[64] AWPD-1 was approved and included in the Victory Program sent to the President on 25 September 1941. Hansell described his staff's elation at having their plan accepted: "We were jubilant. We had crossed the Rubicon. Our concept of a United States Air Force and its strategic employment, had been accepted by the senior military officials in the nation."[65]

WHAT MARSHALL DID TO FURTHER THE ARMY AIR FORCE

When Marshall returned from his trip with Andrews, he encountered the War Department staff's unfavorable views of the Air Corps.[66] There were many reasons for this disfavor – mostly, though, because ground-force officers simply did not understand the capabilities of air warfare. To promote a greater understanding of air issues, Marshall required that ground officers in the War Department ride as passengers on AAC aircraft to give them a better appreciation of air issues. He led by example: He flew everywhere he could, even though life insurance companies would not insure him. If someone on the staff refused to fly, they were relieved from duty with the War Department.[67]

Another personnel issue Marshall learned about on his 1938 trip with Andrews was that the Air Corps was losing many personnel to the commercial aviation industry. Airmen were separating from the Air Corps after receiving specialized aviation training from commercial aviation manufacturers. To stop airmen from accepting lucrative positions with civil aviation industries as soon as they received this training, Marshall proposed that those trainees should incur a three-year commitment prior to starting training.[68]

However, a larger personnel problem Marshall recognized in the Air Corps was lack of a trained and qualified staff. Officers' Professional Military Education came through attendance at Leavenworth and the War College, not the Air Corps Tactical School. At the Army War College, officers learned how to be better commanders and staff officers. Further, officers could not be selected to serve on the General Staff unless they had graduated from the War College. Additionally, they could not attend the War College unless they graduated from Leavenworth. Some said that Air Corps officers did not want to attend these professional schools because they were academically challenging; also airmen did not want to lose their flight pay.[69] Marshall remarked that Arnold, Andrews, and Carl Spaatz had attended these schools and served well on the General Staff. However, Marshall recognized the lack of other qualified staff officers:

> [The staff] were not immature in years, because they were pretty old, but I would say – I used to characterize them to him; they were, I've forgotten the word – I will say antique staff officers-oh, "passé airmen," "passé fliers," I guess is the right word, because they were not trained at that kind of stuff, thing, and they were busy taking stands all the time about promotions. They were already getting more rapid promotions than anyone else in the army or military force we had, navy or anything. But his staff were always agitating about that. The lesser they were, the more they were busy talking about a separate air corps. Well, that was out of the question at that time. They did not have the trained people for it at all.[70]

From airmen, Marshall learned about their slow promotions and lack of representation in the War Department, which he researched and found to be true, contradicting his promotion statement above.[71] Promotions were slow throughout the Air Corps. Giving temporary promotions to airmen did not work because it made ground officers more jealous and hostile, which adversely impacted morale.[72] Marshall struggled with this problem, but kept the issue quiet because he was aware of newsmen who waited for any sensational material to print from the War Department, especially when Congress was debating the creation of an independent air force. With Congressional approval, Marshall solved this promotion problem by eliminating regular officers who were unfit while he expedited promotions for those who were deserving.[73]

Although Marshall addressed Arnold's problem with an inexperienced staff, he came to realize that Arnold had a difficult time firing men who were not performing.[74] To compensate for Arnold's unwillingness to fire poor performers, Marshall assisted his air chief by mentoring young Air Corps majors and lieutenant colonels that were performing. He took them on high-level trips and taught them how to command large numbers of personnel. These airmen had strong convictions about creating an independent air force and strategic bombing, but they lacked the tools to develop an effective air force.[75]

Marshall accordingly provided these airmen with the tools to build an air force and thereby gave the AAF a foundation of outstanding staff officers and future USAF leaders.[76] Hoyt S. Vandenburg, future Chief of Staff of the United States Air Force, then only a Major, accompanied Marshall to England. Besides Vandenburg, Marshall mentored other future leaders: Lieutenant General Harold Craig, future Commandant of the National Defense University, benefited from Marshall's mentoring.[77] Marshall took his charges on trips with him so he could observe them personally, size them up, and mentor them individually. Another

airman who showed potential was a young officer named Lauris Norstad, future general officer and Supreme Allied Commander in Europe.[78] He served on the Advisory Council to General Arnold in Washington, in 1942. Marshall then recognized his potential and asked Arnold why he did not promote Norstad. Arnold replied that he could not because Norstad was too young. He feared more senior staff officers would quit if Norstad were promoted over them. Marshall was unconvinced and added Norstad's name onto the next promotion list to Brigadier General. Marshall recalled that one day Norstad was a major, the next day he was a brigadier general. Only Marshall and Norstad were initially aware of the promotion.[79] In a memorandum dated 20 October 1942 to Arnold, Marshall questioned him about promotion of other officers to brigadier general.[80] Marshall asked why a number of successful wing commanders had not been included on a promotion list. He thus prodded Arnold's unwillingness to promote younger officers before older staff officers were promoted. Marshall reflected in 1957 of the maturing of the air staff:

> Now what I'm going to say right now is not for release, but it is merely to explain my own feelings about it. I had a great deal of trouble about this and I told Arnold one day I was sick and tired of his god-dammed high school staff and to get someone back there that knew how he operated... The great problem was to construct a going staff. After these young men had gone abroad and had vast experiences, and had grown up to command the largest air force the world had ever seen, that was quite a different matter. They knew then, of their own experience, these things which they hadn't known at all before.[81]

Marshall also influenced the air staff in their daily performances of duties. When Kuter approached Marshall on the Air Corps 54-group plan (see page 9), Hansell recalls that Marshall went right to the heart of the problem and questioned them on the objective of the 54-group proposal and its contribution to the overall strategic plan.[82] Hansell's staff learned how to plan strategically from Marshall, which greatly assisted them as they researched and wrote AWPD-1. They learned to focus on the overriding issue: What was the strategic objective of the AAF during World War II?

In order to build a stronger foundation for shared understanding between air and ground officers, Marshall directed that air officers will be initially assigned to ground units. On 24 January 1940, Marshall described for the Commandant of the Command and General Staff College, Brigadier General Lesley McNair, a recent discussion he had with the ACTS faculty.[83] Marshall informed McNair of his decision to assign the 300 flying cadets graduating from Kelly

Field in April to six weeks' duty to Army Maneuver headquarters. This would give air officers practical exposure to ground operations from company to regimental headquarters levels.

In 1940, Marshall proposed an even longer assignment to ground units for those West Point graduates who entered the air corps. These future air officers would learn ground combat operations for one year while assigned to large army ground units. This proposal was difficult for Marshall to reach because it meant that by delaying these officers entry into the air corps for one year, they would have one less year of flying experience, which would detract from their flying proficiency. This would also place them one year behind the basic flying cadets, who were spending only six weeks with ground units. So this delay could potentially create a problem in selecting West Point graduates to command flights and squadrons on the basis of rank, creating what Marshall called "serious consequences."[84] Marshall had not resolved this issue by the time it became a moot point after the United States entered World War II. Once the United States declared war, West Point Air Cadets received their wings immediately upon graduation and were assigned to Air Corps units. What Marshall did decide upon was the introduction of flying courses into the Military Academy curriculum in the spring of 1941. This ensured that the air corps had an infusion of West Point graduates to bolster the quality of air officers.[85] So while Marshall recognized the desirability of having air officers serve in ground units, the exigencies of getting officers quickly into the fight precluded on-going implementation of the valuable training concept.

To further his vision and motivate young officers to want to join the AAF, Marshall stressed the importance of air warfare to the West Point graduating class of 1942. On 29 May 1942 in his commencement speech, Marshall addressed the current United States military expansion.[86] He paid special emphasis to the Army Air Force, declaring, "Pilots represent the flower of American manhood, and our crews the perfection of American mechanical ingenuity," concluding, "no finer body of men can be found."[87] Marshall then returned to his vision of a unified air force led by officers who understood the military intangibles that are taught at the Military Academy.

But personnel issues were not the only ones Marshall concentrated on to develop air power. In the matters of aircraft development and procurement, Marshall displayed a keen interest. The air corps wanted a fleet of large bombers, which inspired airmen and aroused a lot of skepticism from the rest of the army. Nonetheless, Marshall approved the large bomber program as soon as he became the Chief of Staff. Forrest Pogue asked Marshall about his role in the program of developing new weapons and techniques. Marshall replied mostly about his efforts to improve the B-17. The British were not using the fifteen B-17 bombers the United

States sent them in 1941. Even though the United States reluctantly ferried these valuable and scarce aircraft over to Britain, the bombers were parked unused on British airfields. When Marshall asked about this, the British cited the B-17's lack of rear defensive protection. Marshall understood exactly what the British were talking about, having noted the same problem during his earlier visits to the Boeing plant in Seattle, where the B-17s were built. To correct these deficiencies, the aircraft were returned to the Boeing Plant and modified by adding tail guns. Marshall informed Pogue that he visited the plant numerous times to ensure compliance.[88] His many trips to the factories and talks with aircrews served him well when he successfully persuaded the General Staff that the B-17 was more efficient and economical than the B-18 or other medium-type bombers.[89] When it came to development and procurement, Marshall was a hands-on leader.

Marshall took an equal interest in improving fighter planes. Marshall discovered that airmen in the Pacific Theater were complaining about the P-39's inability to outmaneuver the Japanese Zero. Compounding this lack of maneuverability was the fact that P-39s were greatly outnumbered by Japanese planes early in the war. Additionally, the U. S. pilots were greatly fatigued because they were flying too much and relief crews were slow coming into the theater. Marshall investigated the problem and talked to the manufacturers. He learned that the design of P-39s included protective armor around the pilots. He then sent a general officer to the Pacific with authority to remove the armor protection to make the aircraft lighter and more maneuverable. He wanted to show the airmen that the Chief of Staff was concerned about them, but that they were empowered with the final decision. The aircrews elected to keep the armor.[90] Marshall knew, however, that aircraft alone would not make the AAF successful. He surely understood the importance of determining and teaching how to fight and win.

In addition to educating personnel and assisting with aircraft procurement issues for the AAF, Marshall also influenced its doctrine. Air Doctrine initially subjugated the air arm to a supporting role. War Department Training Regulation 440-15 (15 October 1935) defined air power as "the power which a nation is capable of exerting by means of its air forces...Air forces further the mission of the territorial or tactical commands to which they are assigned."[91] Although air power would have an impact on subsequent operations, including some independent air operations, complete control of the air was seen as unlikely in 1935. On 9 April 1942, War Department Field Manual 31-35, *Aviation in Support of Ground Forces*, was published. This manual, blamed by many air historians for creating problems in air/ground coordination, ironically was issued from the Army Air Forces.[92] It subordinated air activity to the ground commander, who was responsible to direct air support in ground operations.

Unfortunately, U. S. forces received little training in air support operations prior to Operation TORCH, the allied invasion of North Africa in January 1943. Marshall directed Arnold numerous times to add aircraft to maneuver training to synchronize the efforts between the air and ground.[93] This air to ground training was difficult to accomplish because the priority was training pilots on basic skills. The training accomplished before the North African invasion came too little and too late. Marshall later related, "Always bear in mind that we did not have much. Much of what we did have was in an amateurish stage, particularly air."[94] But Marshall never gave up in his heartfelt belief that air power -- once technology, staff, and doctrine were properly developed -- could be decisive.

The Capstone manual for air doctrine was War Department Field Manual 100-20, *Command and Employment of Air Power* (21 July 1943), considered by some as the doctrine that granted the USAF its independence. This manual was conceived following Field Marshall Montgomery's distribution of a pamphlet entitled, "Some Notes on High Command in War."[95] Marshall received a copy of this pamphlet from Assistant Secretary of War for Air Robert A. Lovett, on 18 April 1943. The pamphlet basically asserted that a soldier should command the ground forces, and an airman should command the air forces. Montgomery believed that centralized air control allowed the greatest flexibility in exercising air power. As he delivered the pamphlet to Marshall, Lovett noted that it was congruent with the realignment achieved through the War Department Reorganization of 1941.[96] Marshall sent the pamphlet to the War Department's G-3 asking if its principles should be inculcated into a formal document. The G-3 answered that the Army Air and Ground Forces disagreed on this issue. The Operations Plans Division advised Marshall that the "theater supreme commander should exercise his command through the senior officer of each service and, in all cases, the direct command of AAF forces must be exercised by the AAF commander."[97] Although the Army Ground Forces were firmly against any change, their protest went unheeded. Lt Gen Joseph McNarney, Marshall's Deputy of Staff, knew Marshall was committed to formalizing doctrine that air and ground forces were co-equal and independent. Field Manual 100-20 also stated that the first air priority was to gain air superiority and that control of the air would be executed by an air commander working for a theater commander. Aircraft would not be detached to support specific ground forces unless those ground forces were working independently or isolated.[98]

INDEPENDENT AIR FORCE

As the AAF transformed during World War II and matured under Marshall's tutelage, Marshall began thinking seriously of an independent Air Force. When the Senate Military Affairs

Committee conducted hearings after World War II, Marshall wrote Arnold to tell him what the War Department wanted to have accomplished by the legislation for an independent air force.[99] Marshall sought three major outcomes from Congressional legislation:

- Establishment of a single department of the armed forces
- Establishment of the United States Chiefs of Staff
- Establishment of the United States Air Force, co-equal with the Army and Navy

Marshall's statement before the Senate Committee of Military Affairs on 18 October 1945 asserted that the lesson from the last war was that there must be a unified direction of the land, sea, and air forces.[100] He believed that national security was measured by the combination of the three great arms. He stressed the urgent need for an overall, not piecemeal, appraisal of what was required to solve the single problem of national security with the greatest economy compatible with requirements. Combination of the armed services into a unified structure would create efficiency and economy; under the old structure there was a great deal of duplication of effort. This unified direction of the services "would consist of three major divisions: the Air, the Ground, and the Naval forces, the Naval Forces to include the Marine Corps and the Fleet Air Arm."[101] Although joint matters have undergone some difficult growth since Marshall, he was the first to advocate jointness. Today's military is reaping the benefits of his foresight.

LESSONS LEARNED

Marshall's strategic role in the development of U. S. capability to use airpower as a vital instrument of national security offers some valuable lessons:

JOINTNESS

The greatest lesson we can learn from Marshall and his co-founders of air power is that a joint force best carries out modern military missions. Marshall was truly the first joint leader of the United States military. If our military had heeded his lesson after World War II, perhaps we would not have encountered the problems that occurred during Desert One, the hostage rescue in Iran, and Grenada.

MENTORSHIP

Marshall took the time to teach his subordinates how to further the War Department's goals. In addition, he informally identified promising young AAF officers and personally oversaw and developed them, thereby nurturing the future leadership of the USAF. This kind of mentorship occurs in every joint command today. Senior leaders must seek out the future

Vandenburgs, Craigs, and Norstads in all the services and effectively mentor officers to guarantee the future success of the United States military.

The Air Force recently opened an office at Bolling Air Force Base in Washington D.C., called Developing Aerospace Leaders. The Chief of Staff of the Air Force, General Michael Ryan, established the program to develop leaders "who understand, apply and communicate the importance of the aerospace continuum."[102] Regardless of their Air Force Specialty Code, DAL teaches officers to expand their knowledge of the Air Force and therefore be more effective in joint and staff assignments. The DAL stresses mentoring junior officers to prepare them for the constant change that characterizes the military today. This mentorship should be taken one step further by the joint staff: We should establish a program like Developing Joint Leaders for officers of all services to enable them to understand the importance of joint relationships. Lieutenants and captains would then have the opportunity to better understand joint issues before attending Joint Forces Staff College. Officers today need to know that their superiors care about their future, just as Marshall constantly demonstrated his concern for developing future leaders.

CONTINUE TO LEARN, REGARDLESS OF AGE OR POSITION

Even though Marshall was 58 years old when he returned to Washington for his last assignments in the military, he did not let what he did not know or understand hinder him from being arguably the best Chief of Staff the Army or Air Force has ever known. On the wall in the Frederick von Steuben Room at the Army War College is a depiction of Marshall, with this quotation attached:

> It became clear to me that at the age of 58 I would have to learn new tricks that were not taught in the military manuals or on the battlefield. In this position I am a political soldier and will have to put my training in rapping-out orders and making snap decisions on the back burner, and have to learn the arts of persuasion and guile. I must become an expert in a whole new set of skills.[103]

Marshall made this observation in his early years as the Chief of Staff. He acknowledged the complex issues he faced, including building the AAF. Marshall had little background in strategic decisionmaking and the use of air power. When he arrived in Washington in 1938, he went through a shocking introduction on how decisions were made. He was keenly aware of his inexperience.[104] Marshall set an example by learning as much as he could about air power in 1938, by viewing the issue without biases or preconceived notions. Because of his objectivity

and his quick formulation of a strategic vision, he was able to build the foundation of a force that is unmatched today.

A strategic leader must understand how organizations function and then work toward making them more effective.[105] Marshall had great technical skills on how the ground forces in the Army functioned. But he quickly realized he needed to understand larger and emerging relationships in the entire War Departments, while working on improving his political and social competencies. Marshall did this by learning as much as he could in areas where he had acquired little past knowledge. Marshall's knowledge of airpower was indeed limited. Even though the Air Corps was then a branch of the Army, Marshall realized that the Air Corps' role should be redefined, fitting it into a larger warfighting strategy. As air technology emerged, Marshall consistently asked how the Army should effectively employ air power. This was not a natural evolution in the Army. Marshall was the first Chief of Staff to recognize that air power should be used for an independent mission instead of the previously held belief of airpower only carrying out subservient roles of transportation, reconnaissance, and communications to support the ground forces.[106]

VISION

Marshall had a set vision for the Air Corps. According to the United States Army War College *Strategic Leadership Primer,* "strategic leaders develop and communicate a compelling, understandable strategic vision for the organization."[107] Marshall eventually envisioned air power as an equal partner with the ground force. This initial vision of air power did not smoothly evolve to a vision of an independent, co-equal Air Force. The fact of the matter is, amidst all of the other complex and difficult decisions that Marshall made during World War II, he also radically altered his vision of the role of air power in modern warfighting. He mentored junior officers, gave Arnold complete freedom to lead, and changed the perception of the General Staff so that when FM 100-20 was coordinated, the staff accepted it without question. He also communicated a truly "joint" vision to air advocates, so that they accepted their responsibility to operate within the War Department structure.

IMPORTANCE OF RELATIONSHIPS

The relationship that Marshall built with many important political and military leaders contributed significantly to the nation's success during World War II. As the Air Corps grew, his relationship with Treasury Secretary Morgenthau, responsible for aircraft production, did much to further the Air Corps cause with President Roosevelt. In addition, the relationship between

Roosevelt and Marshall ultimately led to Roosevelt's selection of Eisenhower as Supreme Allied Commander of the Normandy landing. Although Roosevelt wanted Marshall to have his place in history, he commented to Eisenhower, "Ike, you and I know who was the Chief of Staff during the last years of the Civil War but practically no one else knows, although the names of the field generals – Grant of course, and Lee and Jackson, Sherman, Sheridan and others – every schoolboy knows them. I hate to think that fifty years from now practically nobody will know who George Marshall was."[108] Roosevelt decided that Eisenhower would lead the invasion, because he needed Marshall where he was, in Washington. Roosevelt could not trust anyone else to replace Marshall's intimate knowledge of both the European and Pacific theaters of war. No one else could fill Marshall's shoes in Washington. Roosevelt told Marshall, "I feel I could not sleep at night with you out of the country."[109] Of course, the importance of personal relationships cannot be discussed without reiterating the great relationship between Marshall and Arnold. Building relationships is important for all leaders today, as defense issues are incorporated into larger national policy issues.

CONCLUSION

George C. Marshall, General of the Army, was instrumental in the development of air power in the United States and should be considered one of the founding fathers of the USAF. Members of the USAF should acknowledge that someone other than an early advocate of air power was responsible for its future growth. Marshall deserves credit for the development of airpower and USAF independence. His vast contributions to air development from 1938 to 1945 were unmatched. His education of air power began with his friendship with Foulois and culminated in the post World War II independence of the USAF. Marshall left a legacy of valuable lessons on jointness, mentorship, lifelong professional learning, vision, and the importance of relationships. Throughout his career, Marshall witnessed and fostered great military force structure changes. While he was Chief of Staff, the Army grew from 174,000 to over 8 million personnel. Marshall taught us that only a balanced military can successfully carry out complex missions. In the future, we will not have time to prepare to win a future war as we did in World War II. Time and financial commitment to develop, procure, and operationally field technologically advanced equipment like the F-22 Stealth Fighter or the transformed Army Tactical Vehicle require service leaders to make tough decisions without yielding to parochial service allegiance. Only individuals with Marshall's gift for leadership can see beyond their own service and commit to the future.

WORD COUNT = 9454

ENDNOTES

[1] Larry Bland, editor of the four volume series on The Papers of George Catlett Marshall, telephone conservation with author, 17 October 2000. He said that Marshall would not have accepted praise.

[2] George Marshall, Hap Arnold, and Ernest King, The War Report of General of the Army George C Marshall, General of the Army H.H. Arnold, and Fleet Admiral Ernest J. King (Philadelphia, Pennsylvania: J.B. Lippincott Company, 1945), 16.

[3] Larry I. Bland and Sharon R Ritenour, eds., The Papers of George Catlett Marshall, Volume 1 (Baltimore, Maryland: John Hopkins University Press, 1981), xxix-xxx.

[4] Larry I. Bland, eds,.The Papers of George Catlett Marshall, Volume 1, "The Soldierly Spirit", December 1880 – June 1939 (Baltimore, Maryland: John Hopkins University Press, 1981), 50.

[5] John F. Shiner, Foulois and the United States Army Air Corps, 1931-1935 (Washington, D.C.: Office of Air Force History, 1983), 40.

[6] Bland, The Papers of George Catlett Marshall, Volume 1, "The Soldierly Spirit", December 1880 – June 1939, 50.

[7] Forrest C. Pogue, George C. Marshall: Education of a General, 1880-1939 (New York: The Viking Press, 1978), 632.

[8] Although he wrote his World War One memoirs between 1919 and 1923, his diary was not published until 1976 by his stepdaughter. Marshall earlier changed his mind about publishing the diary and recalled it from the publisher. He then instructed that the manuscript be destroyed after his death and his wife complied, or so she thought. That was the only diary he left behind of his personal observations besides his 23 taped interviews with Mr. Forrest Pogue between 28 Sept 56 and 11 Apr 57 documented by Pogue in the book George C. Marshall, Interview and Reminiscences. During World War Two, Douglas Southall Freeman recommended to Marshall he keep a diary as others were doing. Marshall did not believe in keeping diaries because maintaining it would detract from his full attention being directed toward the war effort: "In the first place it tends to cultivate a state of mind unduly concerned with possible investigations,

rather than a complete concentration on the business of victory. Further, it continually introduces the factor of one's own reputation, the future appreciation of one's daily decisions, which leads, I feel, subconsciously to self-deception or hesitations in reaching decisions."

[9] Marshall George C., Memoirs of My Service in the World War, 1917-1918 (Boston, Massachusetts: Houghton Mifflin Company, 1976), 81.

[10] Ibid., 87.

[11] Ibid., 131. Marshall used his aviation assets to assist in reconnaissance and to gather intelligence.

[12] Ibid., 199.

[13] Forrest C. Pogue, George C. Marshall: Education of a General, 1880-1939, 632.

[14] H. H. Arnold, Global Mission (Blue Ridge Summit, Pennsylvania: Tab Books INC., 1989), 538.

[15] Ibid., 195.

[16] Ibid., 44.

[17] Robert E. Lester, ed., The Papers of George C. Marshall (microform): Selected Correspondence (Bethesda, Maryland: University Publications of America, 1992), reel 3.

[18] H. H. Arnold, Global Mission, 205.

[19] Ibid., 165.

[20] Ibid., 165.

[21] Dik Daso, Architects of American Air Strategy; Gen Hap Arnold and Dr Theodore von Karman (Montgomery, Alabama: Air University Press, 1997), 61.

[22] Major General Jack Houston, USAF Ret, interview by author, 23 October 2000, Annapolis, Maryland. Arnold related in his book, Global Mission, how on one long walk, he

asked Marshall's advice on how to make secret modifications on the B-29 to accommodate the atomic bomb. Marshall and Arnold worked out a plan that only a few people would know and therefore no one else would suspect what was the real reason for the changes to the aircraft.

[23] Ed Cray, General of the Army, George C. Marshall, Soldier and Statesman (New York: Cooper Square Press, 2000), 374.

[24] Ibid., 165.

[25] Forrest C. Pogue, George C. Marshall, Interview and Reminiscences (Lexington, Virginia: George C. Marshall Research Foundation, 1991), 436-437.

[26] Marshall and Arnold did not always get along. Some statements from Arnold embarrassed Marshall. From reel 13, reports written on 14 and 16 February 1945 show just one example where Arnold voiced his dissent to the Secretary of War when Marshall removed two of his statements on where the country's defense line should be placed. Marshall removed these statements because Arnold's belief that a system of air bases must extend well beyond the US domestic shores was not consistent with national policy.[26] Marshall, however, encouraged his subordinates to voice their dissenting views. In his lecture titled "George Washington and George Marshall: Some Reflections on the Military Tradition," from the Harmon Memorial Lectures in Military History Number 26, United States Air Force Academy, Colorado, 1984, 12, Don Higginbotham reflected that when Marshall became the Chief of Staff in 1939, he surrounded himself with the most talented officers in the Army. General Omar Bradley recalled that after the first week of working for Marshall in Washington, Marshall called him and the rest of the staff into his office and told them he was disappointed in them. When they asked why, Marshall responded that they did not disagree with him on a single issue. Marshall believed that if there was no debate or questioning, he would never know if he had made the right decisions.

[27] Forrest C. Pogue, George C. Marshall, Interview and Reminiscences, 358.

[28] Thomas Coffey, Hap, The Story of the United States Air Force and the Man who Built It – General Henry H. "Hap" Arnold (New York: The Viking Press, 1982), 259.

[29] Congress created the United States Army Air Corps in 1926 from the U. S. Army Air Service. The United States Army Air Force was created in 1941.

[30] Larry I. Bland, ed., The Papers of George Catlett Marshall, Volume 1, "The Soldierly Spirit", December 1880 – June 1939, 616.

[31] Robert E. Lester, ed., The Papers of George C. Marshall: Selected Correspondence (microform), (Bethesda, Maryland: University Publications of America, 1992), reel 3, letter dated 3 August 1938.

[32] Ibid., reel 3. Comments added from a letter from Andrews to Marshall dated 1 August 1938.

[33] Larry I. Bland, ed., The Papers of George Catlett Marshall, Volume 1, "The Soldierly Spirit", December 1880 – June 1939, 617.

[34] Robert E. Lester, ed., The Papers of George C. Marshall: Selected Correspondence (microform),reel 3, letter dated 1 April 1939.

[35] Ed Cray, General of the Army, George C. Marshall, Soldier and Statesman, 130.

[36] Forrest C. Pogue, George C. Marshall: Education of a General, 1880-1939, 322.

[37] Robert Lester, ed., The Morgenthau Diaries, Prelude to War and War, 1940-1942 (microform), (Bethesda, Maryland: University Publications of America, 1996), reel 41.

[38] Forrest C. Pogue, George C. Marshall: Education of a General, 1880-1939, 323.

[39] Forrest C. Pogue, George C. Marshall, Interview and Reminiscences, 281.

[40] Forrest C. Pogue, George C. Marshall: Education of a General, 1880-1939, 323.

[41] Forrest C. Pogue, George C. Marshall, Interview and Reminiscences, 109.

[42] Ed Cray, General of the Army, George C. Marshall, Soldier and Statesman, 139.

[43] Ibid., 165.

[44] Forrest C. Pogue, George C. Marshall: Ordeal and Hope, 1939-1942 (New York: The Viking Press, 1967), 28.

[45] Ibid., 30.

[46] Ed Cray, General of the Army, George C. Marshall, Soldier and Statesman, 154.

[47] Forrest C. Pogue, George C. Marshall, Interview and Reminiscences, 330.

[48] Ed Cray, General of the Army, George C. Marshall, Soldier and Statesman, 156.

[49] Ibid., 165.

[50] Robert T. Finney, History of the Air Corps Tactical School, 1920-1940 (Washington, D.C.: Center of Air Force History, 1992), 130. Of the 76 students in the class, 60 were Air Corps officers, 5 Coast Artillery officers, 2 Infantry officers, 2 Field Artillery officers, 1 Signal Corps officers, 1 Chemical Warfare officer, 1 Cavalry officer, 1 Naval officer, and 3 Marine Corps officers. The rank breakout was 3 Lieutenant Colonels, 25 Majors, 45 Captains (Navy Lieutenant included), and 3 First Lieutenants.

[51] Ibid., 8.

[52] Haywood S. Hansell, "The Development of the United States Concept of Bombardment Operations," Lecture, Maxwell Air Force Base, Alabama, Air War College Lecture, 16 February 1951, Maxwell AFB Historical Research Agency #K239.0512-918, 7.

[53] Wesley F. Craven and James L. Cate, The Army Air Forces in World War II, Volume One: Plans and Early Operations January 1939 – August 1942 (Chicago, Illinois: University of Chicago Press, 1948), 51.

[54] Larry I. Bland, ed., The Papers of George Catlett Marshall, Volume 1, "The Soldierly Spirit", December 1880 – June 1939, 631 – 635 and H. A. DeWeerd,ed., Selected Speeches and Statements of the General of the Army George C. Marshall, Chief of State United States Army, (Washington, D.C.: The Infantry Journal, 1945), 1-3.

[55] Larry I. Bland, ed., The Papers of George Catlett Marshall, Volume 1, "The Soldierly Spirit", December 1880 – June 1939, 633.

[56] Ibid., 634.

[57] Ibid., 635.

[58] Charles E. Kirkpatrick, An Unknown Future and a Doubtful Present, Writing the Victory Plan of 1941 (Washington, D.C.: United States Army Center of Military History, 1992), 52.

[59] Ibid., 55.

[60] Haywood S. Hansell, Jr., The Air Plan That Defeated Hitler (Atlanta, Georgia: Higgins-McArthus/Longino & Porter, INC., 1972), 76-77.

[61] Ibid., 63-64.

[62] James Gaston, Planning the American Air War, Four Men and Nine Days in 1941 (Washington, DC.:National Defense University Press, 1982), 103.

[63] Haywood S. Hansell, Jr., The Air Plan That Defeated Hitler, 94.

[64] Ibid., 89 & 95.

[65] Ibid., 96

[66] Forrest C. Pogue, George C. Marshall, Interview and Reminiscences, 340.

[67] Ibid., 311.

[68] Larry I. Bland, ed., The Papers of George Catlett Marshall, Volume 1, "The Soldierly Spirit", December 1880 – June 1939, 619. Marshall, in a memorandum to General Embick, Deputy Chief of Staff, on 22 August 1938 wrote to correct this problem, his solution was to discharge an individual before training, then reenlist them for three years. This way the service was retaining trained personnel with two more years of service before they could separate from the service and obtain a very good civilian job.

[69] Forrest C. Pogue, George C. Marshall, Interview and Reminiscences, 311.

[70] Ibid., 436.

[71] Ibid., 310.

[72] Ibid., 313.

[73] Mark S. Watson, United States Army in World War II, The War Department, Chief of Staff: Prewar Plans and Preparations (Washington, D.C.: United States Government Printing Office, 1950), 247. The new law was Public, 190, dated 29 July 1941.

[74] Forrest C. Pogue, George C. Marshall, Interview and Reminiscences, 615.

[75] Ibid., 437.

[76] Ibid., 437.

[77] Available from http://www.af.mil/news/biographies/craig_ha.html; Internet; accessed on 28 December, 2000.

[78] Available from http://www.af.mil/news/biographies/norstad_l.html; Internet; accessed on 28 December 2000.

[79] Forrest C. Pogue, George C. Marshall, Interview and Reminiscences, 439.

[80] Robert E. Lester, ed., The Papers of George C. Marshall: Selected Correspondence (microform), reel 12, letter dated 20 October 1942.

[81] Forrest C. Pogue, George C. Marshall, Interview and Reminiscences, 314.

[82] Haywood S. Hansell, Jr., The Strategic Air War against Germany and Japan (Washington, D.C.: Office of Air Force History, 1986), 30.

[83] Robert E. Lester, eds., The Papers of George C. Marshall: Selected Correspondence, (microform), reel 36. McNair was an old friend of Marshall's who was placed in command of the school to reform it.

[84] Ibid., reel 36.

[85] Register of Graduates and Former Cadets; United States Military Academy, West Point (West Point, New York: Association of Graduates, 1993), 262 – 343. Below is a table depicting the number of USMA graduates that reached Flag Rank in the USAF.

Year	1939	1940	1941	1942	1943	1943	1944	1945
BG	9	2	3	6	10	9	6	3
MG	11	4	5	3	6	8	2	6
LTG	2	4	2	1	2	8	0	2
GEN	1	1	1	1	2	0	0	1

Since 1939, the following were the graduation numbers and those graduates that achieved the rank of General from the United States Military Academy:

1939: 455 graduates: General Jack G. Merrill

1940: 448 graduates: General Theodore R. Milton

1941: 423 graduates: General George S. Brown

1942: 373 graduates: General Lucius D. Clay

1943: January - 408 graduates: Generals Louis T. Seth and Louis L. Wilson

1943: June - 513 graduates: none

1944: 473 graduates: none

1945: 851 graduates: General John W. Pauly

1946: 874 graduates: Generals Lew Allen, William J. Evans, and Brice Poe

[86] H. A. DeWeerd, ed., Selected Speeches and Statements of the General of the Army George C. Marshall, Chief of State United States Army, 202.

[87] Ibid., 203.

[88] Forrest C. Pogue, George C. Marshall, Interview and Reminiscences, 264-265.

[89] H. H. Arnold, Global Mission, 180.

[90] Forrest C. Pogue, George C. Marshall, Interview and Reminiscences, 379-380.

[91] Robert F. Futrell, Ideas, Concepts, Doctrine: Basic Thinking in the United States Air Force, Volume I, 1907 – 1960, (Maxwell Air Force Base, Alabama: Air University Press, 1989), 78.

[92] Richard G. Davis, Carl A. Spaatz and the Air War in Europe (Washington, D.C.: Center for Air Force History, 1993), 133.

[93] Robert E. Lester, ed., The Papers of George C. Marshall: Selected Correspondence (microform), reel 12. Letters dated 6 June 1940, 16 July 1941 and 10 Jul 42.

[94] Forrest C. Pogue, George C. Marshall, Interview and Reminiscences, 581.

[95] Richard G. Davis, Carl A. Spaatz and the Air War in Europe, 212.

[96] Ibid., 212.

[97] Ibid., 213.

[98] Ibid., 214.

[99] Robert E. Lester, ed., The Papers of George C. Marshall: Selected Correspondence (microform), reel 3, letter dated 29 October 1945.

[100] Verifax 4255, Item 5359 from the Marshall Center Collection in Lexington, Virginia.

[101] Robert E. Lester, ed., The Papers of George C. Marshall: Selected Correspondence (microform), reel 31, 13 Oct 45.

[102] Available from www.af.mil/news; Internet; Accessed 29 December 2000.

[103] Roderick R. Magee II, eds., Strategic Leadership Primer (Carlisle Barracks, Pennsylvania: United States Army War College, 1998), 1.

[104] Mark A. Stoler, George C. Marshall: Soldier-Statesman of the American Century (Boston, Massachusetts: Twayne Publishers, 1989), 67.

[105] Roderick R. Magee II, ed., Strategic Leadership Primer, 41.

[106] H.H. Arnold, Global Mission, 163.

[107] Roderick R. Magee II, eds., Strategic Leadership Primer, 19.

[108] Ed Cray, General of the Army, George C. Marshall, Soldier and Statesman, 9.

[109] Ibid., 13.

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