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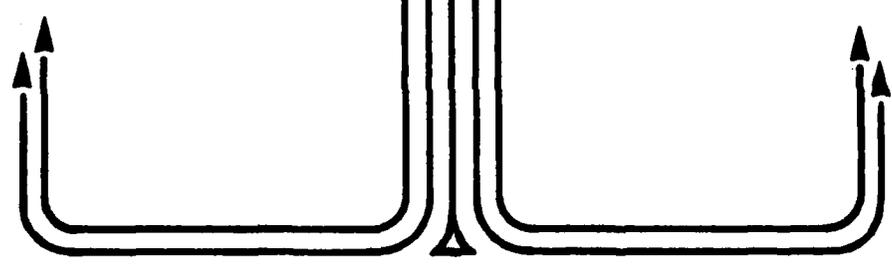
CURTIS E. LEMAY A GREAT WARRIOR

MAJOR IAN E. ROBINSON 84-2190
"insights into tomorrow"

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requirements for graduation.

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ABOUT THE AUTHOR

Major Ian E. Robinson [REDACTED]

[REDACTED]. He graduated from Lindbergh High School in St. Louis and then attended the University of Missouri. After graduation with a degree in Mechanical Engineering, he entered Officer Training School (OTS) at Lackland AFB, Texas. He received his commission on 10 September 1970 and went to Undergraduate Navigation Training at Mather AFB, California.

After receiving his wings, he was stationed at Blytheville AFB, Arkansas, flying the B-52G. He flew more than 60 combat missions over North and South Vietnam while TDY to Guam. After returning from Guam he finished work on his masters, receiving a Masters of Science in Business Management from the University of Arkansas. He then upgraded to radar navigator in the B-52G before being transferred to Ellsworth AFB, South Dakota in March 1977.

At Ellsworth, he served in the Bomb Wing staff as Wing Navigation Officer and Target Study Officer. He then moved to the rated supplement at Ellsworth and served as the maintenance supervisor of the 28th Avionics Maintenance Squadron. Following two years in the rated supplement, he

CONTINUED

returned to rated duties as the Chief of Bombing and Navigation Branch at Ellsworth. He is a Senior Navigator with more than 3300 flying hours in the B-52G and H.

Among other decorations, Major Robinson has been awarded the Air Force Meritorious Medal with an oak leaf cluster, the Air Medal with two oak leaf clusters and the Air Force Commendation Medal. He completed Squadron Officer School in residence in 1975 and is a graduate of the Air Command and Staff College in the class of 1984.

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CHAPTER 1

INTRODUCTION

The Problem

Carl Von Clausewitz in his highly quoted book On War defined strategy as, "The use of an engagement for the purpose of war." (5:128) The Webster's Third New International Dictionary defines strategy as "the science and art of employing the political, economic, psychological, and military forces of a nation or group of nations to afford the maximum support to adopted policies in peace or war." (20:2256) The United States Air Force Air Command and Staff College (ACSC) at Maxwell AFB, Alabama, teaches that "strategy is the process that connects ends with means." (30:7) We can see by looking at these varying definitions that strategy is indeed a complex term that can mean different things to different people. At ACSC we want to gain a better understanding of the entire strategy process. Studying the strategy of great warriors such as General Curtis E. LeMay is one method used to aid in understanding the strategy process. A comparison and contrast of his different theaters of operation in World War II; i.e., the European and Pacific theaters, provide a unique opportunity to look at the evolutionary strategy process. A

review and analysis of the military strategy of General LeMay in the context of the ACSC strategy process model will provide insight into strategy and the actual process by which it is derived.

Significance of the Problem

The strategy employed by the great warriors of World War II was not something they created in a "bell jar" vacuum. Strategy is indeed an evolutionary process anchored in military history. During the French Revolutionary and Napoleonic Wars, the principle strategy consisted of a battle of masses. Technological advances created the need for different strategies in later wars. During the American Civil War, the simple invention of the railroad allowed for moving armies greater distances at greater speed. This necessitated a change in military strategy to one of trying to cut the opponents' railroad lines. Later, technological advances in the area of the combustion engine meant we could fight a war anywhere in the world. This again required a change in our military strategy. The study of strategy and techniques used in World War I influenced our strategy in World War II. Likewise, World War II strategies influenced the Korean War and so on. Studying military history allows for insight into future strategies to be employed. Through the years strategy has changed or evolved into a battle of brain power. Our policy makers and military strategists must have sufficient

knowledge to properly employ our sophisticated weapons. There is a real need to be smarter than the enemy in the employment of military power. For these reasons studying the military strategy used by General LeMay will aid in better comprehending the strategy process.

Assumptions Made by the Author

The author assumes the reader is familiar with the ACSC strategy process model in order not to duplicate ACSC course material. For those readers who are not familiar with the model a short paragraph covering the highpoints follows.

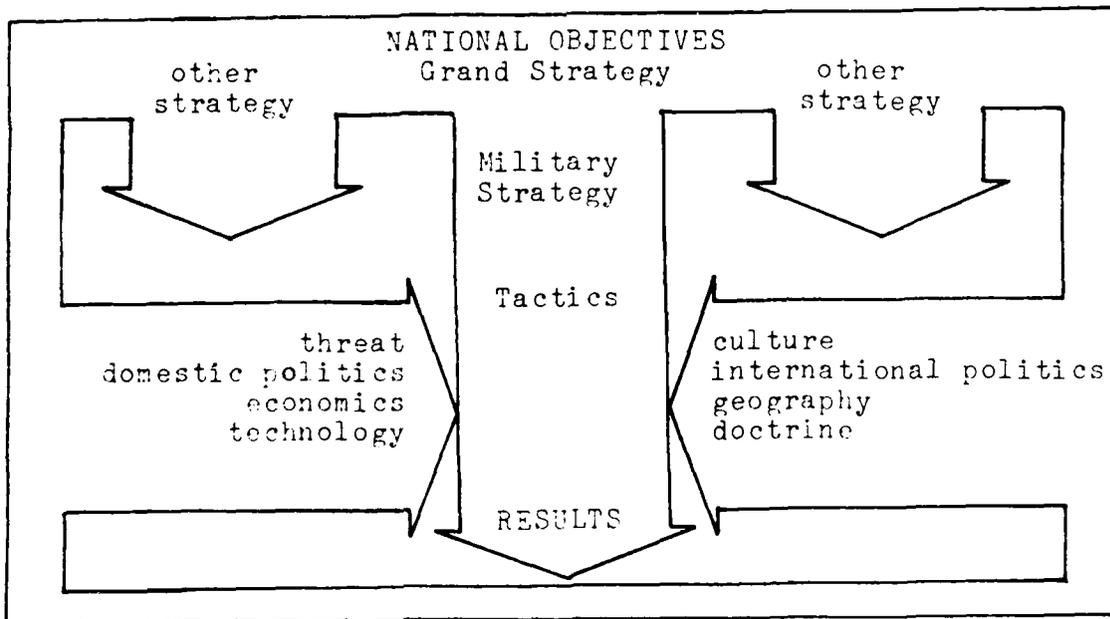


Figure I

THE STRATEGY PROCESS (30:13)

The strategy process consists of four fundamental steps that define the types of decisions the strategist must make. First, the national objectives that are to be attained must be defined. Everything in the process model flows from our national objectives. Secondly, our grand strategy, or policy, must be determined from our national objectives. Thirdly, from this grand strategy, military strategy is then derived. Finally, our tactics, or battlefield strategies are determined from our basic military strategy. This process gives us a link from political ends to battlefield means. There are, however, some other external factors that constrict or twist the straight line flow from national objectives to battlefield tactics. A few of these factors are the threat, domestic politics, economics, technology, physical environment, international politics, cultural heritage, and military doctrines. Each of these factors may influence the battlefield tactics and somewhat change the various alternatives available to the strategist. (30:8-15)

Limitations

The discussion of General LeMay's strategy is limited to his tour of duty in Europe and the Pacific during World War II. The primary source data is secondary sources due to research time constraints.

The discussion of each theater is not intended to be a

detailed history of the entire war in that theater. The key decisions and the factors involved in making those decisions are intended to provide insight into the strategy process.

Chapter 2

LEMAY'S BIOGRAPHY

Introduction

The purpose of this chapter is to provide a biographical background sketch of General Curtis E. LeMay. The chapter sequentially lists the events of LeMay's life from birth through retirement from the U.S. Air Force. The chapter concludes with a list of significant events in the rise to command of General LeMay.

Biography

Curtis E. LeMay was born 15 November 1906 in Columbus, Ohio. He was the son of an iron worker and the oldest of six children. His early years were tough ones, and LeMay sold newspapers and shoveled snow after school to earn extra money. His high school years produced a fierce "single purpose first" attitude. LeMay paid little attention to girls and would much rather spend his time building crystal "wireless" sets or hunting the hills of southern Ohio. (4:403) After graduation from high school in June 1924, he tried to enter the U.S. Military Academy at West Point but could not gain a congressional appointment. LeMay then chose to enter Ohio State University and study civil engineering. At Ohio State

he took an active part in the Reserve Officer Training Corps (ROTC) unit because he knew the top class members would receive a Regular Army commission. However, the demands of foundry work to support himself in school, prevented his graduation from college with the rest of his class. But, LeMay did complete ROTC with a reserve commission in artillery. He then joined the Ohio National Guard and applied for aviation cadet training.

Two events influenced LeMay's growing interest in flight school. One was Charles A. Lindbergh's historic flight across the Atlantic. "It was Lindbergh's flight to Paris which caused. . . .[LeMay] and his best friend Francis H. (Butch) Grisewold, to put in for flying cadet school." (4:403) Additionally, another Columbus, Ohio native, Eddie Richenbacker, had an influence upon LeMay. Richenbacker's name was spread all over the Columbus newspapers. (1:246) In November 1928, LeMay was accepted into air cadet training. During his flight schooling, while other classmates would travel to Los Angeles for the weekends, LeMay would, "hang back to take engines apart, work at machine guns, and pour over weather charts and navigation logarithms." (4:404) LeMay graduated from the Cadet program receiving his wings on 12 October 1929.

His first assignment was to Selfridge Field, Michigan, with the 27th pursuit squadron. LeMay remained at Selfridge

until October 1934, except for two temporary detachment assignments. The first of these was to Norton Field in Columbus, Ohio, as an assistant engineer and operations officer. During this time, from September 1931 to March 1932, he completed the requirements for and received his degree in Civil Engineering from Ohio State. The second temporary duty was at Langley Field, Virginia from October to December 1933. At Langley Field, LeMay studied advanced navigation and became one of the first navigator-pilots. In October 1934, he was transferred to the 18th Pursuit Group at Schofield Barracks, Hawaii.

At Schofield Barracks, LeMay flew pursuit aircraft where he improved his pilot skills and further advanced his knowledge of weather and machinery. In January 1937, he was transferred to the 49th Bomb Squadron at Langley Field, Virginia. This marked the beginning of a new era for LeMay. He made the transition into bombers easily and functioned as a navigator/pilot in the new B-17. In a short time he became Operations Officer of the 49th Bomb Squadron, where he flew as lead navigator in the flight of six B-17s to South America in February 1938. For their participation in this goodwill flight to Bogota, Columbia, the group earned the MacKay Trophy "for superior achievement in aviation." In May 1938, LeMay flew as the lead navigator with the lead crews and took part in what he calls "the most exciting event" of his life--the

interception of the Italian Liner "Rex". With only fragmented information available as to the Rex's whereabouts and with a live National Broadcasting Company radio broadcast following their progress, his crew intercepted the "Rex" 615 miles out in the Atlantic Ocean. In July 1938, LeMay left the 49th Bomb Squadron to study at the Air Corps Tactical School at Maxwell Field. Following graduation, LeMay returned to the 49th Bomb Group as Operations Officer and later commanded the 7th Bomb Squadron. Because of his extensive background in long range over water navigation, LeMay is transferred to the Ferrying Command (superseded by the Air Transport Command). In this position, he pioneered the ferry routes to Africa via South America and to England via the North Atlantic. As stated in the award to accompany the Distinguished Flying Cross "he made landings at fourteen strange airports. . . .in general too small for the successful operation of the B-24 airplane."

(4:404)

In October 1941, LeMay is assigned as Operations Officer of the 34th Bomb Group at Westover Air Base near Springfield, Massachusetts. He was serving in that capacity when the United States entered the war in December 1941. LeMay himself felt a sense of relief. He stated:

Sure there isn't anything very pretty in the spectacle of our sailors and soldiers lying burned or drowned out there in Hawaii; but at least we did have some sense of relief. Now we knew where we were going. We were going to war. (16:208)

In May 1942, LeMay formed the 305th Bomb Group, his first real command.

The 305th was ordered to Muroc Field, California, (later named Edwards Air Base). LeMay organized and prepared the 305th for deployment to England to engage in the bombing offensive against Germany. Two months after deploying to England in August 1942, his group flew its first mission into enemy territory on 17 November. While commanding the 305th, LeMay developed several combat tactics that were later incorporated throughout the 8th Air Force. His "single purpose first" attitude came out in his determination to put the bombs on the target. With this attitude, LeMay molded the 305th into one of the best bombing units in the war. In July 1943, he was selected for promotion to General and given command of the Fourth Combat Wing, which was later redesignated the 3rd Air Division. In August 1943, LeMay led the 3rd Air Division on the first shuttle mission of the war. The 3rd Air Division struck the principal Messerschmitt plant in Regensburg, Germany, and, instead of returning to England, proceeded to land in North Africa. For his heroism, LeMay was awarded the Distinguished Service Cross in December 1943.

In September 1944, LeMay took command of the B-29 operations of the 20th Bomber Command in the China-Burma-India (CBI) Theater. At the time, China was the only location

available to mount raids against Japan. All supplies, from typewriters to bombs, had to be flown across the Himalayan Mountains to forward staging areas. LeMay supervised this airlift and mounted several B-29 bombing missions against Japan and Japanese occupied territory in Asia. The poor bombing results, logistical problems, and the fact that the Mariannas Island bases were captured by the Marines and made ready for B-29 operations, all caused the CBI operations to wind down. In January 1945, LeMay was sent to Guam to replace Major General Haywood (Possom) Hansell, Jr. as commander of the 21st Bomber Command.

In this role, LeMay organized and planned the bombing raids that would be the beginning of the end for Japan. He soon changed bomb loads from general purpose bombs to incendiary bombs (fire bombs) and, acting without contacting his superiors, also changed bombing tactics. Alexander de Seversky, a well known writer on air subjects, has written that LeMay's decision, "in the perspective of history, will surely rate with Admiral Nelson's to maintain the battle at Trafalgar. These were decisions under fire that spelled the doom of our enemies." (25:8)

In July 1945, the 21st Bomber Command was redesignated the 20th Air Force with LeMay as commander. On 2 August, LeMay became Chief of Staff Army Strategic Air Force under General Carl "Tooe" Spaatz. In this capacity, he oversaw the atomic

bombing raids on Hiroshima and Nagasaki that led to the war's end. (19:235)

With the war over, LeMay returned to the United States and was offered the vacant Senate seat of Harold Burton of Ohio. However, he turned it down saying, "Thank you, but I want to stay in the Air Force." (1:262) In early 1946, LeMay was designated Deputy Chief of the Air Staff for Research and Development. His task during his tenure was to evaluate new technological development and pass judgment as to whether or not the Air Force should accept the designs for use on future Air Force systems. In September 1947, LeMay became Commander, U.S. Air Forces, Europe, where he would later engineer the opening of the Berlin Airlift.

In July 1948, the Russians imposed a blockade of all passengers and freight traffic on the ground between Berlin and the West German occupation zones. Lt. General LeMay gathered all the C-47 and C-54 transport aircraft available and launched "Operation Vittles", which delivered 1500 tons of needed supplies to Berlin daily. He returned to the United States in October of 1948. On arrival back to the United States, LeMay took command of the Strategic Air Command (SAC). He built SAC into the United State's prime deterrent force. After leading SAC for nine years, he is ordered to the Pentagon in Washington to become Vice Chief of Staff, United States Air Force. He served in this capacity until July 1961,

when he became Chief of Staff. On 1 February 1965, Curtis E. LeMay retired.

Since his retirement, LeMay has been very active in the business community and the political arena. He was a candidate for Vice-President of the United States in 1958. He also appeared as a guest speaker and acted as a consultant on military matters, and was the chairman of the board of an electronics firm. (19:235-236)

KEY EVENTS AND RISE TO COMMAND

1906 November	Curtis E. LeMay was born in Columbus, Ohio
1928 November	Accepted into Air Cadet Training
1929 October	Received pilot wings, commissioned into air corps
1932 March	Receives BS in civil engineering
1935 June	First Lieutenant
1938 February	Led goodwill flight to South America; receives MacKay Trophy
1938 May	Led B-17 intercept of Italian liner "Rex"
1938 July	Starts study at Air Corps Tactical School, Maxwell Field
1940 January	Captain
1941 March	Major

1941 January-October	Organized and flew overwater navigation routes to Mid East
1942 January	Lt. Colonel
1942 March	Colonel
1942 May	Commander of 305th Bomb Group
1942 August	Deployed with the 305th to England
1942 November	305th flew first mission in enemy territory
1943 February	Led first "straight and level" bomb run on St. Nazier raid
1943 July	Commander, 3rd Air Division
1943 August	Led Regensburg raid, received Distinguished Service Cross
1943 September	Brigadier General
1944 March	Major General
1944 September	Commander, XXth Bomber Group (CZI)
1945 January	Commander, XXIst Bomber Group
1945 March	Initiates fire bombing of Japan
1945 July	20th Air Force Commander
1945 August	Chief of Staff, Army Strategic Air Forces, oversaw atomic bombing of Japan
1947 September	Command, U.S. Air Forces, Europe
1947 October	Lt. General
1948 July-October	Engineered Berlin airlift

1948 October	Commander, Strategic Air Command
1951 October	General
1957 July	Vice Chief of Staff, USAF
1961 July	Chief of Staff, USAF
1965 February	Retired
1968	Candidate for Vice President of United States

Chapter 3

LEMAY IN EUROPE

Introduction

The purpose of this chapter is to give insight into the military strategy of General Curtis E. LeMay. The chapter begins with three significant events that provide LeMay with our national objectives, grand strategy, military strategy, and military hardware to be used in the European Theater. The chapter concludes with a discussion of General LeMay's actions pertaining to his military strategy (in the European Theater) within the context of the ACSC strategy process model.

B-17 Development

Before analyzing LeMay's strategy in the European Theater, it is necessary to review a few significant events that affected LeMay's thinking and determined much of our national objectives, grand strategy, and military strategy at that time. The events include the development of the B-17 heavy bomber, the ideas and teachings at the Air Corps Tactical School that influenced air doctrine, and the buildings of a war plan on the assumption that the United States would be drawn into the war.

From the end of World War I until 1937, the United States

did not have an airplane that could be used in a strategic bombardment role. On 1 March 1937, the first B-17 was delivered to the Army Air Corps at Langley Field. The B-17 "Flying Fortress" was a long-range bomber with an extraordinary performance and powerful armament. It also had the navigational aids and bombsight best suited to perform in the strategic offensive role. But, the B-17 development and acquisition into the Army Air Force was not easy. Early budget fighting between Air Corps Chief, General "Hap" Arnold, and Secretary of War, Harry Woodring, almost eliminated the B-17 from existence. The contract cost was \$205,000 per airplane; however, the Air Corps wanted such a large order the Material Division felt the cost should be \$198,000 per airplane. (14:23) General "Tooe" Spaatz, by a stroke of luck, had to replace Arnold at a Material Division Command meeting to resolve the issue. It was Spaatz's foresight to simply remove items from the plane that would put the cost in line. An electrically controlled cowl flap mechanism, external bomb racks, and other odds and ends were shed. The \$7,000 difference was narrowed considerably. (14:24) In addition to cost, there were other factors that affected the development of the B-17.

Brigadier General Walter Kilner, assistant Air Corps Chief, decided a study was needed on weapons, equipment, and aircraft. A board, headed by Kilner, provided findings for much needed plans for improving the characteristics of all

different types of military aircraft. The Kilner board played an important role in the development of the B-17 for its strategic role. The most significant results were aircraft manufactured after 1930, including the B-17, would have self sealing gas tanks, armor protection for the pilot, bombers equipped with tail guns and a number of other important refinements. The B-17 was built to fulfill the role of precision daylight bombing strategy. (14:21-25)

Air Corps Tactical School

Another event of major importance was the development of air doctrine. The Air Corps Tactical School was established in 1920 as a Field Officer's School at Langley Field, Virginia. It expanded its scope and placed emphasis on air power employment at the end of the decade. In 1931, the school moved to Maxwell Field, Alabama, where it was blessed with an extremely talented group of leaders. One of them, Col. John F. Curry, stands above the others in the development of air doctrine.

As commandant of the school, he provided a shield between his gifted instructors and the harshly critical superiors in Washington. His gift of freedom of thought and expression allowed Captain Harold "Hal" George and others to develop a strategic air doctrine. (11:14) It was Captain George who took the ideas and concepts of Douhet, Trenchard, and Mitchell, and advanced them into a war-winning potential

airpower. The basic doctrine developed at the school emphasized concentrated bombing of the enemy's industrial capability to produce war making materials rather than attacking the enemy armies in the field. Captain George described the doctrine this way:

. . .the destruction of the military forces of the enemy is not now and never has been the objective of war; it has been merely a means to an end-- merely the removal of an obstacle which lay in the path of over coming the will to resist. The real objective of war is to overcome the hostile will [of the enemy]. (12:32-33)

Many other air pioneers perceived the use of an air force to accomplish this objective, but again it was George who summarized that if an Air Force's bases were within radius of action of the vital elements of the enemy, it could be used:

- (1) To destroy the social-economic-industrial systems on which a major enemy state was dependent for its life as a modern great power--the intricate, sensitive, inter-related system which supply power, fuel, transportation, communications, water and food; or,
- (2) To destroy the industrial means of providing munitions and supplies which the enemy armed forces must have in order to fight; or,
- (3) To destroy the means by which finished munitions are delivered to the enemy troops; or,
- (4) To attack enemy armed forces directly--especially enemy air forces. (21:37)

These possible uses of air power were the "road bed" for the school's five strategic air options. One of the options was indirect air attack of the economic and social structure of

the enemy state, "including destruction or neutralization of electric power systems; communication systems; basic economic industrial production; water supply systems and food production systems." (12:47)

Capt. Haywood Hansel and First Lieutenant Ken Walker, also instructors at the school, adopted a theory of probabilities from firing manuals of the Army Field Artillery and Coast Artillery. These probabilities were used to determine the amount of ordnance required for precision bombing to destroy a given target. The air doctrine called for bombing specific targets with sufficient force determined by the probability theories to destroy the target. The school stated it in this manner:

By the time bomber force had penetrated weather and enemy defenses to reach the target, it had paid the price of admission. It had taken the great majority of the losses that would be sustained on the mission. That being the case it was wiser to employ sufficient force to make target destruction almost certain and avoid the need to carry out a second mission which would incur those losses all over again. (12:18)

Air War planners could then determine the size of the bomber force required to destroy a given target. The only element of unknown would be the effect of the enemies defensive forces. This was a major controversy at the Air Corps Tactical School. Major Claire Chennault, chief of the pursuit section, argued that "[the bombers] ceiling, bomb load, and defensive firepower were sadly limited" (12:18) But the advent of

newer bomber aircraft with retractable landing gear and single wing with stressed skin construction propelled the bomber past the fighter, giving the bomber survivability that was undreamed of in World War I. This led the majority of the school's air power thinkers to agree with Ken Walker's conviction that "a well planned and well conducted bombardment attack, once launched, can not be stopped." (12:15) This same "thinking" unfortunately also appeared in the development of our air war plans, causing our planners to overlook the need for long-range escort fighters.

Curtis LeMay attended the Air Corps Tactical School in 1938 and was taught the ideas and concepts that were the backbone of the air doctrine. It had a definite influence on his own strategy development.

The Air War Plan

In February 1941, the Americans and the British met in secret to discuss contingencies for the United States in case we should enter the war. In these conferences, later called ABC-1, it was agreed that if the U.S. entered the war it should wage a maximum strategic offensive effort against European Axis powers, along with strategic defensive operations in the Far East with minimum diversion of forces. Specifically stated: "Offensive measures in the European area will include a sustained air offensive against German military power, supplemented by air offensives against other regions

under enemy control which contribute to that power." (13:v)
The ABC-1 conference provided the beginning of our military strategy. In May 1941, a U.S. war plan called Rainbow-5 was produced that further detailed our plans if we should enter the war. (9:14)

On 9 July 1941, two weeks after Hitler launched his massive attack against Russia, President Roosevelt sent a letter to the Secretaries of War and Navy asking for an "estimate of overall production requirements required to defeat out potential enemies." (7:TAB A) Harold George, now a Lt. Colonel, had just arrived in Washington and was heading up the new Air War Plans Division under General Arnold. George was joined in the new division by Lt. Col. Ken Walker, Major Laurence Kuter and Major Haywood Hansell. The tasking to write the "air requirements" annex fell upon the Air War Plans Division. The four men, who were all instructors together at the Air Corps Tactical School, saw this as an excellent opportunity to sell their air power theories. They carefully prepared a plan that called for a "sustained air offensive against German military power, supplemented by air offensives against other regions under enemy control which contribute to that power." (13:v) Using ABC-1 and Rainbow-5 as their guidance, the four staff officers developed a plan known as Air War Plans Division 1 (AWPD/1).

The significance of the plan lies in the fact that it

called for U.S. national strategy "to defeat our potential enemies." (27:TAB1, 1) This established our national objectives. The grand strategy called for military power as the primary means to meet our objective followed by massive aid to our allies. (27:TAB1, 1) The air annex further identified primary objectives for our military strategy to include the type targets to be attacked. It identified electric power plants, transportation facilities, and petroleum and synthetic oil production as primary targets. The plan also acknowledged the German Air Force and that it would have to be defeated before any ground invasions could be contemplated. Hence, the defeat of the German Air Force became an intermediate objective with overriding importance. Other key elements of the plan called for the bomber force to devote its entire strength to these targets for six months. It allowed for limited scale bombing to begin a year after the war started, and it wasn't expected a full bomber offensive could be mounted until nine months later. This meant it would be 27 months after the outbreak of war before the bomber offensive would be completed. (13:viii)

The plan further called for B-17s and B-24s to be stationed in England, and the starting of development of the long-range B-29 in case Britain should fall into enemy hands. Prior to our entry into the war, strategy was then pretty well mapped out. The entire plan was written in 13 days and

furthermore, proved to be surprisingly accurate in the total numbers required to defeat our enemy in Europe. (13:vii)

The Japanese bombed Pearl Harbor on 7 December 1941, only a couple of days prior to AWPD/1's scheduled briefing date to the President. A good number of the Navy's ships were destroyed at Pearl Harbor. This meant the only option open was to use the air annex of AWPD/1, because the Army relied heavily on the Navy for troop movements. Pearl Harbor also caused a revision to AWPD/1 to address the Japanese entering the war. On 15 December 1941, AWPD/4, the revision to AWPD/1, was completed. The revised national strategy placed primary emphasis for protection of the United States first and the British Isles second. Of greater importance, however, was the clarification of military strategy. AWPD/4 called for the defeat of Germany first and Japan second, and identified an air offensive as the primary means to do so. This was the first time in history air power was designated as the primary weapon in fighting a war. (28:1)

These events provided LeMay with our national objectives our military objectives, our air power doctrine and an aircraft to accomplish his mission. Each of these to some degree will affect LeMay's strategy process.

LeMay's Strategy Process

The evolution of LeMay's strategy was influenced by many different events. LeMay's early years laid the ground work

for the basis of his strategy. The influence of Rickenbacker and Lindbergh developed around LeMay's "single purpose first" attitude brought flying into the forefront of his thinking. The goal of flying for the Army Air Corps came into being with his acceptance into the flying cadet program. But one of the major influences on LeMay's strategy would come later during his first assignment at Selfridge Field, Michigan. In October 1933, a requirement to send somebody to the new Navigational School at Langley Field came down from Washington. LeMay was chosen because he had previously shown an interest in navigation.

A gentleman by the name of Harold Gatty was engaged by the United States Army Air Corps as a senior navigation research engineer. Gatty had studied navigation under Lieutenant Commander Weems and was the navigator on the "Winnie May" when Wiley Post made his around the world flight. (16:94) The Army Air Corps had practiced little or no celestial navigation previously. Gatty had figured out a way to adopt some of the Navy shipboard methods to use in airplanes. He was instructing the Army Air Corps pilots in his new methods. LeMay was attending Gatty's course during the development of the B-10, our first so-called (long-range) aircraft. These two facts gave LeMay the first inclination that navigation and long-range aircraft were going to be part of our strategy in the future.

After returning to Selfridge, LeMay was sent to the 18th Pursuit Group at Schofield Barracks, Hawaii. During his tour LaMay started a navigation course for the senior officers and others who had not attended the school at Langley. He had to stay one jump ahead of his students and this required a lot of homework and practice which sharpened his navigation skills even further. During this time the embryonic B-17, then called the Boeing 299 bomber, flew 2,100 miles non-stop from Seattle, Washington, to Dayton, Ohio. (25:9) This and the navigation school induced LeMay's thinking about bombers. In LeMay's own words:

The fighter had evolved as a defensive weapon. How the hell were you going to win a war with it? It might have its innings in certain phases of warfare, just as attack people might have their innings. But who was it who'd go far beyond the enemy lines and attempt to destroy not only armies in the field, not only supplies and fuel dumps and tank concentrations up near the front; but would go deep into the enemy's homeland. Undoubtedly the navigational school had sharpened up my thinking along this line. At least it got me to speculating in terms of long range flying and the defense of the Islands, or defense of the American continental shoreline. And, considering certain well-tested and unimpaired Axioms, an even more capable defense by means of an offense waged from other point on the earth's surface. (16:124-125)

Bombers had now surfaced in the strategy thinking of LeMay. He realized that a powerful defensive and offensive force could be launched through bombardment. LeMay's strategy process brought bombers into the forefront and he volunteered for a job in bombardment and got it. LeMay was transferred to

the 49th Bomb Squadron at Langley Field, Virginia. While serving in this capacity two other significant events will influence LeMay's strategy. The first of these was the influence of his part in intercepting the "Rex".

In 1938, acting as a lead navigator, LeMay led a flight of 3 B-17's out to sea. His commander, Lt. Colonel Robert S. Olds, was a hard taskmaster and wanted a test "to see how good our navigators really were." (25:9) Additionally, General Headquarters (GHQ) Air Force, commanded by Lt. General Frank M. Andrews, had been seeking an opportunity to show the capability of the long-range bombers. Olds had received word that the Italian liner "Rex" was to be in the area of the Air Corps maneuvers taking place at Mitchel Field, Long Island, New York. It was suggested that an intercept of the "Rex" would be an opportunity to gain excellent publicity and would probably be featured in all the New York City newspapers. Olds' group was to intercept the Italian ship between 600 and 700 miles out at sea. (21:103) The sketchiest of information about the location of the ship was given to the crews and the weather was poor and getting worse. To apply further pressure, the National Broadcasting Company had a network announcer and crew on board LeMay's aircraft to provide a live news report. The "Rex" was intercepted at exactly 1225 hours, almost to the second of the time estimate by LeMay. (16:188-191) The ramifications of this demonstrated

precision navigation had a significant impact on LeMay's strategy. He began to realize how accurate a B-17 could be with navigation alone. The technology had advanced far enough for a B-17 to be flown a great distance and precisely find a target. This technology was beginning to plant the seed in LeMay's mind as to what could really be accomplished with a B-17.

The second significant event prior to the war that influenced LeMay's strategy process was attending the Air Corps Tactical School. For members in the Army Air Corps in those days there was no written doctrine. Furthermore, there wasn't any guidance for how our combined air forces were going to fight and win a war. The instructors at the Air Corps Tactical School were all advocates of air power and long-range strategic precision bombing. The Air Corps Tactical School also emphasized that daylight strategic bombing was essential, and that night time area bombing was impractical. Most important the school preached that air power could be used to win wars. Along with these teachings, LeMay reaffirmed what he learned from the long distance flight of the first Boeing 299 and his navigational experience. Airpower and particularly bombardment were to be involved in the strategy of the Air Corps. (25:9) LeMay admitted:

I became convinced during my studies there (at Maxwell) that airpower was definitely a new dimension in warfare. I was convinced that it must

be applied as an entity under the central control of airmen who knew and could exploit to the fullest its unprecedented capability for decisive application.
(25:9-10)

LeMay learned at the Air Corps Tactical School the doctrine that would influence his strategy.

Prior to arriving in Europe as commander of the 305th, the overall strategy of the war in Europe had already been determined. This left only the evolution of tactics to be determined by the battlefield commanders. Likewise, prior to his arrival in Europe, LeMay had already been influenced by the Air Corps Tactical school, his navigational feats with the long-range B-17, and his experience in the Ferrying Command prior to the U.S. entering hostilities. He also was well aware of the national objectives, grand strategy and military strategy to be employed to defeat the Germans.

As a commander in Europe, one of his first concerns was putting the bombs on target. LeMay reviewed the bombing results from other bombing raids and discovered that the accuracy was poor at best, with one-half of the bombs dropped not even near the target area. On their way to England, LeMay and the 305th was fortunate enough to run into Colonel Frank Armstrong who was returning to Washington, D.C. Colonel Armstrong was one of a half-dozen airmen selected by General Ira C. Eaker to set up the Eighth Bomber Command and had served as Eaker's operations officer in addition to commanding

the 97th Bomb Group. As a combat veteran, Armstrong told LeMay and the crews of the 305th that the flak was terrible. He also indicated that if you flew straight and level for over 10 seconds you were going to get hit. (16:230) This fact stuck with LeMay. He summarized that the bombardiers didn't have a chance of hitting the target area in 10 seconds, not to mention what those gyrations were doing to the Norden bomb sight. Following these discussions LeMay dug out an artillery manual left over from his artillery days at Ohio State. LeMay did not have any ballistic data on the German 88s which were being used for antiaircraft artillery, but he did have information of the French 75 antiaircraft artillery. LeMay calculated that for the French 75 to "hit" a motionless B-17 from 25,000 feet away would require 372 rounds. He decided that since the B-17 was moving these were not such bad odds. Additionally, he knew that technology had provided his B-17 with self-sealing gas tanks and additional armor. These facts influenced LeMay to change the bomber tactic to straight and level flight from the Initial Point to the target. The results of this new tactic were more hits upon his B-17s from the flak, but his units' bombing results were much improved. This same tactic was later tried by the rest of the Eighth Air Force with success. (25:6-7)

The B-17 had also been equipped with a tail gun for bomber defense. Additionally, at the Air Corps Tactical

School, LeMay was taught General Ken Walker's principle: "a well planned and well conducted bombardment attack, once launched, can not be stopped." (12:15) Walker also professed that a bomber force could fight its way to the target area and fight its way out. LeMay built upon this tactic by coming up with a combat box formation. Instead of having three six-plane elements, he put all eighteen ships into a staggered formation that would be able to put maximum firepower out against the German's. LeMay's "box" also minimized the number of B-17s exposed to the fighter attack. (1:250) This was another example of a technological improvement, the on board aircraft guns, that created a change in LeMay's strategy and ended up as an Eighth Air Force tactic. A version of LeMay's combat box was adopted throughout the Eighth Air Force. A political decision of the President also impacted on LeMay's strategy.

Just after the entry into the war by the United States, the American public was clamoring for a sign of victory. At the same time, British Prime Minister Churchill wanted the United States to provide support for the North African campaign against the Germans. General Arnold and others in Washington tried to talk the President out of this but the domestic and international political pressures caused the President to initiate operation "TORCH". The end result of "TORCH" was to place emphasis in Africa rather than in Europe.

(7:574-575) As a result of "TORCH" a number of the experienced crews and bombers were directed to Africa. This coupled with combat losses left LeMay with some inexperienced people. As always LeMay was concerned about his bombing results and he knew his inexperienced crews were not going to bomb as well as the veterans. This political decision caused LeMay to come up with a "lead crew" system. This system provided for the veteran navigators and bombardiers to lead the remainder of the crews across Europe. The inexperienced crews would salvo their bombs on the lead bombardier's signal, thus insuring the chance for better bombing accuracy. LeMay felt that by "one stroke you raised the accuracy of the whole Group from the common denominator to the level of your best man." (17:xiii)

LeMay further influenced the battlefield tactics as commander of the Regensburg shuttle raid. This called for his 3rd Air Division to launch against the Messerschmitt plant in Regensburg, Germany, and then continue on to recover in North Africa. Once in North Africa the crews and aircraft were to be regenerated to hit targets again in Germany and recover this time back at home station in England. This sounded like an excellent battlefield tactic but the economics of the times didn't allow for it. After trying the shuttle LeMay commented that the strategy didn't work because:

1. A bomber can't operate at a deployed location

without a crewchief.

2. Maintenance at the deployed location is inadequate.
3. Landing at a deployed location put additional strains on the crew that adversely affected their performance. (16:297)

The economics involved in moving crewchiefs and providing a supply point at a forward operating area made the shuttle system less than satisfactory. The tactic was not tried again.

In summary, we can see that LeMay's strategy indeed evolved over a period of time. It was a process that involved LeMay becoming interested in flying, learning the virtues of long range navigation, and then realizing the possible advantages of bombardment. The process also gave LeMay our national objective "of totally defeating our enemy" and applied various constraints of economics, technology, politics and doctrine to derive a military strategy that fulfilled the set objective.

The U.S. Strategic Bombing Survey came to the concensus that "Allied air power was decisive in the war in Western Europe." (24:61) The final report stated:

Its [air power] power and superiority made possible the success of the (Normandy) invasion. It brought the economy which sustained the enemy's armed forces to virtual collapse (even if it is true that in the prevailing circumstances) the full effects of this collapse had not reached the enemy's front lines when they were overrun by Allied (ground) forces. (24:61)

It was due to the men like General Curtis LeMay who molded their strategy into a war winning effort.

Chapter 4

LEMAY IN THE PACIFIC

Introduction

The purpose of this chapter is to give insight into the military strategy of General Curtis C. LeMay. The chapter begins with significant events prior to August 1944 that influenced LeMay's strategy. It continues with a discussion of his military strategy as commander of the XX Bomber Command in the China-Burma-India (CBI) theater and is followed by a look at his tour of command of the XXI Bomber Command on Guam through August 1945. The chapter will conclude with an analysis of LeMay's strategy within the context of the ACSC strategy process.

Significant Events Prior to LeMay Entering the CBI

LeMay's strategy in the Pacific Theater was affected by several events prior to his arrival in theater. These events include the development of the B-29 aircraft, objectives and strategies formulated by the Air War Plans Division, and LeMay's command experiences in the European Theater. Each of these events have significance on the strategy General LeMay will use in the Pacific Theater.

B-29 Development

The development of the B-29 began before the United States entered World War II. The "Superfortress" had its start in 1938 with the Boeing model 334, a pressurized B-17 with triangle undercarriage. Boeing Aircraft Company had taken some monetary risks and built a mock-up prior to obtaining a commitment from the military. In May 1939, General Henry H. "Hap" Arnold formed a board to examine all kinds of aircraft and determine which ones the military should procure. General Walter Kilner chaired a board of distinguished aviators including Charles A. Lindberg and Colonel Carl "Tooey" Spaatz. The Kilner Board recommended to General Arnold that the United States proceed with the development of a very long-range, heavy bomber. The Boeing B-29 was selected to fulfill this role. The B-29 came out of Boeing as a defensive aircraft, for long-range reconnaissance or strikes against the enemy at sea. However, even as early as September 1939 Spaatz had the foresight to suggest that the B-29 could be used against Japan from bases in Luzon, Siberia or the Aleutians. General Arnold managed to get approval for letting of contracts to continue further development in December 1939. (3:1-3)

Momentum to sustain the development of the B-29 occurred in 1940. Our war planners perceived the need for heavy bombers in the intercontinental range because the availability

of bases in England was still in doubt. A fallback position of bombing Germany from the Mediterranean air bases provided the impetus to fully develop the B-29. (17:xvi)

The B-29 was not developed without some major aircraft problems. The engines overheated, swallowed valves, cracked their casings and caught fire. Problems plagued the central fire control system for gunnery and blisters in the glass windows would blow out under pressurization. However, the B-29 could carry a large payload, a long distance and at very high attitudes. (3:65) General Arnold achieved nothing less than a miracle in getting the B-29 developed, produced and fielded. (17:xvi) Even with the major problems, Arnold's efforts made the B-29 available for employment by LeMay in the CBI before August 1944. The development and deployment of this long range bomber had a significant effect on the military strategy employed by the United States.

Development of Strategies Against Japan

The Air War Plans Division under Lt. Col. Harold George formulated the war plans to defeat the axis powers. The Army Air Corps' plan AWPD/1 defined the U.S. national strategy relative to the war in Europe. The national objective was to "defeat our potential enemies." (27:TAB1, 1) Military power was determined to be the primary means to attain the objective. However, as in most cases of grand strategy development, national objectives can not be achieved without

the coordinated use of other national power instruments. In addition, a massive mobilization of American industry to support our military power and military needs, was identified in the plan. These two components formed our grand strategy.

A military strategy for the Air Corps was based upon the doctrine taught at the Air Corps Tactical School at Maxwell Field, Alabama. For this reason AWPD/1 identified targets in Germany and listed a priority in which to attack them.

(27:TAB2) Thus, AWPD/1 also identified the military strategy to be employed by the Army Air Corps.

On 7 December 1941, the Japanese bombed Pearl Harbor and destroyed a large portion of the Navy's war fighting capability. The Army also relied upon the Navy for troop movement abroad. This left only the Army Air Corp's war plans in being. (12:96-97) On 15 December 1941 a revision of AWPD/1 clarified our national objectives and military strategy. The revised plan, known as AWPD/4, called for defeat of Germany first and then Japan. (28:6) Our military strategy was further defined and airpower was identified as the only military means left to achieve our military objective.

In August 1942, the overall climate in the war had changed and President Roosevelt asked for "an estimate of requirements to obtain air ascendancy over our enemies." (11:15) The Air Staff prepared a reply known as AWPD/42. The

national objectives and grand strategy remained the same as AWPD/1. However, for the first time, an air offensive against Japan, after defeat of Hitler had been assured, was identified.

(29:TAB,2) Furthermore, AWPD/42 consigned the B-29s to the Pacific, where their range and payload would be needed against Japan. (22:111) AWPD/42 stated the situation in this manner:

In the Japanese theater, we would be unable to attack the real sources of Japanese strength, in Japan proper, except by very long range bombers [the B-29]. It is doubtful whether these bombers could be made available in sufficient quantity by the end of 1943 to have a decisive influence on Japan.

(29:TAB A,1)

There was no detailed strategic air plan for Japan comparable to the strategic air plans against Germany. A suggested list of target systems was devised; however, very little was known about Japan's internal industrial structure. Japanese security was very good and this eliminated a long laundry list of Japanese targets like we had in AWPD/1 for Germany. (22:113) However, Japan was now included specifically in our national objectives, grand strategy and military strategy. Our national objective was total defeat of Germany followed by defeat of Japan. Our grand strategy determined that military and economic instruments of power were to be used against our enemies. Finally, our military strategy identified airpower, and specifically the B-29, to be used as the means to fulfill that strategy in the Pacific Theater.

Strategy Learned in the European Theater

LeMay came into the Pacific Theater fresh from command in the European Theater. As a commander in Europe, he had seen the effects of air doctrine taught at the Air Corps Tactical School. LeMay attended the Air Corps Tactical School in July 1938 and was taught the doctrine of concentrated bombing of the enemy's industrial capability rather than their armies in the field. (4:404)

As the commander of the 305th Bomb Group, LeMay had put the theories of strategic precision bombardment to use. He had long been a proponent of the heavy bomber and felt it had been decisive in combat against the Germans. LeMay designed a combat box formation that later was adopted by the entire 8th Air Force as the basis for their flying formations. Additionally, he initiated straight-in bomb runs that improved the bombing accuracy and started a lead crew system that would improve the navigation and bombing of the entire group. (1:250-251) Probably more important, however, were two lessons LeMay learned in Europe that he brought into the Pacific.

The first of the two lessons was his determination to bomb accurately. LeMay felt that once a bomber force had past the majority of the enemy defenses to get to the target, they must reap the benefits. (26:23) He so strongly believed in

the strategic bombing theory, that he will always be remembered for "getting the bombs on the target at all costs." (15:vii) He demonstrated this theory in Europe and brought it with him to the Pacific. A second lesson LeMay brought to the Pacific dealt with training. He was one who felt you could never rehearse enough for battle. LeMay acted upon the belief that you could not hold young pilots, navigators or bombardiers responsible for professional results unless they were professionally trained. (14:vii)

Each of the aforementioned significant events impacted upon the strategy LeMay used in the Pacific. He was provided the B-29 for his employment against Japan. The Air War Plans provided the national objective, grand strategy and military strategy to be used. Finally, LeMay had witnessed the results of Air Corps Tactical School doctrine of strategic bombing and learned some valuable lessons in the application of that doctrine. In the Pacific, LeMay put all of these to use.

LeMay's Strategy in the Pacific (CBI)

General LeMay arrived in the Pacific to take command of the XXth Bomber Command equipped with B-29s. The XXth was supporting the MATTERHORN plan which was a plan to base B-29s in the China-Burma-India Theater and bomb targets in Japan. The plan was designed to carry out these raids until a closer suitable location was obtained for basing the B-29s. The decision to execute MATTERHORN now rather than waiting for

islands bases was purely political. It was to entice Generallissimo Chiang Kai-shek to keep his Chinese forces fighting the Japanese. It also was thought by President Roosevelt, that periodic bombing of Japan would be a big morale booster for the Chinese people. (11:19)

The logistic requirements were staggering and the MATTERHORN plan proved to be a logistical nightmare. The B-29s were to be stationed in India for security reasons. They would then stage out of forward area bases in the area of Chengtu, China. All supplies, from typewriters to bombs and fuel, were ferried by B-29s across the "Hump" from Calcutta supply bases to the Chingtu staging bases. (11:19-21) For fuel alone it would take seven B-29 support sorties flying the hump to fly one combat sortie. (3:68)

LeMay arrived 29 August 1944 and immediately wanted to put his precision bombardment strategy to work. The previous commander, General K. B. Wolfe, had launched several attacks with very limited success and a high number of aircraft losses. (8:94-101) LeMay remembering his lessons learned in Europe, saw the problem as similar to the early days of B-17 operations--poor training, poor organization and not getting the bombs on the target. He soon started a training program, devised a lead crew system and changed the combat formations. His training program was an eleven day course on target identification, navigation, bombing and gunnery held at

Dudhkundi, India. LeMay did away with the four-plane diamond formation and introduced the twelve plane "combat box." He also wanted a synchronous radar bomb run with both the radar operator and the bombardier following the bomb run and visually determining who would take over the bomb. LeMay streamlined the organization by disbanding sixteen maintenance squadrons and one bomb squadron in each group. He also started "training missions" in India against less demanding targets than raids into Japan and Manchuria. In total, LeMay tried to make the XXth Bomber Command like the Eighth Air Force in Europe. (3:68-70)

LeMay's strategy in the CBI applied what he learned about strategic precision bombing and his experiences in the European Theater. He wanted the B-29 to strike industrial targets in Japan and to do so in the daylight with precision accuracy. The basic strategy was applying the present Army Air Corps doctrine and LeMay's own historical application of that doctrine into a strategy to bomb Japan. The MATTERHORN plan eventually ran aground for two reasons. The first was the logistical complications in supplying the B-29s for a mission from Chengtu. The second was the American ground forces captured the Mariannas and made the island bases available for B-29 operations. The logistics made it almost impossible to reach Japan from the forward staging bases and only the northern island of Japan was within range of the

B-29s. With the capture of the Mariannas, the B-29s were being diverted to those island bases leaving LeMay insufficient aircraft in the CBI to carry out his overall strategy.

General LeMay's military strategy to employ the B-29s in the CBI was severely constricted by a political decision and geographical factors. The United States developed and deployed the B-29 to strike targets in Japan. General LeMay attempted to fulfill the national objectives and grand strategy outlined in the Air War Plans Division plans; AWP/1, AWP/4 and AWP/42. He also attempted to employ proven tactics such as the "combat box" and lead navigation and bombing crews. General LeMay was sure he could mount an effective offensive bombing campaign against Japan, but poor logistics and the long range to Japan prevented the success of the B-29 strategic bombing campaign from the CBI.

LeMay's Strategy in the Pacific (Mariannas)

Since October 1944, General Haywood S. "Possum" Hansell, one of the original Air War Plans Division planners, was commander of the XXI Bomber Command and had been conducting B-29 operations from the Mariannas. The command was slowly growing as more and more B-29s came off the Boeing assembly line. Additionally, the CBI operations in MATTERHORN had ground to a halt with all the B-29s being diverted to the Mariannas Island bases. The XXI Bomber Command had grown to 4 bases; two on Tinian and two on Guam. (8:512) Equipped with

the aircraft and within range of Japan from the Mariannas, the American bomber forces were now ready to commence B-29 operations.

In November 1944, General Hansell launched the first strike against Tokyo by the B-29s. The bombers encountered a headwind in the target area of 120 knots and an undercast which required radar bombing. The mission resulted in the typical results for the XXI, poor bombing accuracy, a large number of aborts and bombers having to ditch in the Pacific for lack of fuel. (8:555-559) This caused General Hansell to report to General Harmon, Deputy Commander of the 20th Air Force that, "Experience indicates that the most vital factor influencing every operational decision and the performance of every operational mission is the weather." (10:66)

LeMay was sent to Guam in January 1945 to take charge of the XXI Bomber Command. Once again his analysis of the problem areas pointed at training. (16:342) LeMay improved upon the crew training schools already established by Hansell. He added radar interpretation to the ground school and improved the lead crew school. (16:344-345) (11:60) He also streamlined maintenance in the 73rd wing by consolidating the resources of the groups. (11:60)

LeMay then put his precision bombing strategy to work against Japan. The XXI Bomber Command launched numerous missions against Japanese aircraft factories and achieved the

same result as Hansell. The weather in the target area made visual bombing impossible, and the aircrews were forced to revert to radar synchronous bombing, a less accurate system. For six weeks LeMay's crews attempted to destroy selected targets with precision strategic bombing but the results were less than satisfying. General Norstad paid a visit to LeMay and informed him, "General Arnold was far from satisfied with their performance." (11:60)

At this point a new appraisal of the precision bombing of Japanese industry was required. There were three critical factors that entered into LeMay's strategy process. In China, General Claire Chennault, whose long service in that country made him an oriental expert, told LeMay about the Japanese "cottage factories". The Japanese had broken down their industry into small units and spread it throughout their residential areas of their cities. This made bombing Japanese industrial facilities somewhat ineffective. (1:257) A second factor that influenced LeMay's precision bombing strategy was the technological advancement in bombing radar. The APQ-13 radar had proven to produce consistent accurate results and was being put on newer B-29s. This meant the undercast weather should no longer be a factor in precision bombing. (11:60) The third and final factor that influenced LeMay's change in tactics was brought to light by one of LeMay's wing commanders. Brigadier General Thomas S. Power commanded the

new 314th Bombardment wing whose B-29s were equipped with the new APQ-13 radar. On February 25th General Power led a total of 172 "Superforts" over Tokyo, and using radar, they dropped incendiaries on Tokyo. The next day reconnaissance photos showed the target and a couple adjacent blocks had all been destroyed. (10:82-83) The thought occurred to Power and his operations officer, Colonel Hewitt T. Wheless, of the damage that could be inflicted with a low altitude B-29 incendiary strike.

General Power and Colonel Wheless took the idea to LeMay, who agreed with the plan. LeMay changed his tactics from high level strategic bombing to low level incendiary bombing at night. Additionally, some of the defensive armament was removed to make room for up to 20,000 pounds of bombs. (10:82) The APQ-13 aircraft were to light up an "X" in Tokyo for the follow on B-29s to define as the aim point to drop their bombs. The low level bombers would also be under the weather problems previously encountered. (6:150-158)

The results of the first raid on 10 March 1945 were devastating. Almost 16 square miles of Tokyo were gutted, 18 percent of the industrial area, 63 percent of the commercial area, and the heart of the residential area. Furthermore, close to 113,000 people were killed. (6:273) The bombing continued for 10 days and 4 other major Japanese cities were attacked. The civilian casualties were astronomical and the

bombing demoralized the Japanese public. LeMay justified the fire bombing by saying:

What it came down to was that fire bombing of these cities, brutal as it was for non-combatants, was the only way to destroy Japan's ability to wage war--a war that she had provided by her sneak attack on Pearl Harbor. (18:197)

LeMays battlefield strategy resulted from an evolutionary process. He started with high altitude precision bombardment that he used in Europe. The switch to low level nighttime bombing came about because of many constraints on the battlefield strategy being used. First, the culture of the orient gave the Japanese the ability to spread their industry through their civilian population. Second, the technological advances in the B-29 gave LeMay an all weather bombing capability. Next, the environment in Japan had caused previous daylight precision bombing to be ineffective. Lastly, domestic politics, from the President down through General Arnold to LeMay, created a need to change battlefield strategy and produce results. LeMay's actual strategy to combat Japan did indeed evolve slowly from the early days in his life to his becoming a superb tactical bombardment commander in the Pacific during World War II.

Chapte. 5

Comparison and Contrast of The Strategy Employed by LeMay

In both the European and Pacific theaters Curtis C. LeMay operated with identical national objective, grand strategy, military strategy and air doctrine. The Air War Plans Division identified our national objective and grand strategy in the AWP/1, AWP/4, and AWP/42 documents. The national objective was to totally defeat our enemies (Germany followed by Japan). The grand strategy identified the military as our primary instrument of power to meet the national objective. The military naturally would have to be sustained through economic power from our industrial manufacturing base.

The military strategy in both theaters was also similar but for different reasons. The Japanese destroyed a good portion of the Navy's surface vessels at Pearl Harbor. This severely hindered any plan to put the Navy into action in the European Theater. It also prevented the Navy from providing troop movement for the Army which was a requirement for an invasion in the European Theater. This left only the air arm of the Army Air Corps to be used at the outset of the war, and was followed by a land invasion later. In the Pacific, the

military strategy was affected by the island geography of the theater. The basic military strategy was to establish an air and sea blockade and intensive air bombardment from progressively advanced bases. Once again a ground invasion was to be planned later. In essence, a bombardment campaign was to be used in both theaters followed by a ground invasion. The air doctrine employed by LeMay was the doctrine taught at the Air Corps Tactical School at Maxwell Field, Alabama. Rather than attack the enemy's armies directly, the doctrine was to strike at the enemy's industrial strength and destroy their ability and will to wage war. This indeed was the same tactical doctrine applied by LeMay in Germany and Japan.

There are other similarities in the strategies that evolve in the two theaters. The constraints placed upon the evolution of LeMay's battlefield strategies were similar. In both theaters a political influence from home affected the battlefield tactics. Roosevelt felt the political pressure to create successes in both campaigns. In the European Theater he forced operation "TORCH" to give the American public some feeling of accomplishment against the Germans. This caused LeMay to lose experienced crews to the North African campaign and created the need for a lead crew system to be developed. This in turn affected the accuracy of the bombing and the number of aircraft available to strike the German targets. A similar political decision created the implementing of

operation "MATTERHORN" in the Pacific Theater. Roosevelt wanted to give the Chinese a boost of confidence and keep them in the war against Japan. This forced "MATTERHORN" into being. It affected LeMay's strategy in that it was logistically impossible and it prevented his using B-29s to strike the industrial heartland of Japan because of the distance to these targets.

Technological similarities also existed between the theaters. The Kilner Board recommended the production and modifications of both the B-17 and the B-29 to fulfill different roles. The B-17 was developed as a middle-range bomber to be used from England against German targets. The B-29 was developed as a long range inter-continental bomber to be used against German targets in case Britain should fall. LeMay knew the technological advancements of the B-17 and put them to use against German targets. Self sealing tanks and additional armor allowed for straight and level bomb runs against heavy flak. The B-29 was specifically identified to go to the Pacific when it was assured Britain would not be lost. The technological advancement of the new APQ-13 radar allowed LeMay to use the B-29 in all types of weather and with improved accuracy.

Economic factors also played an important role in the strategy process in both theaters. Our economy could not produce sufficient bombers or transport aircraft. The few

numbers of bombers prevented LeMay from putting up sufficient numbers to completely destroy desired targets in Germany. In the Pacific, the limited numbers of transport aircraft caused the B-29s to carry supplies from India to forward bases in China. This reduced the number of missions LeMay could generate to hit targets in Japan.

In contrasting the two theaters there appears to be a glaring difference between the two campaigns. In Europe, LeMay followed the air doctrine of daylight precision bombing against the German's industrial base. In Japan, the tactic of nighttime area fire bombing was employed against the Japanese industrial base. In actuality, this is just another step in the strategy process. German factories were in brick buildings that were not highly combustible and required great accuracy to destroy. LeMay initially employed this same strategy against Japan but met great difficulty in achieving success. Two things plagued LeMay, the first was the weather in Japan during the winter months and the second was the Japanese "cottage box" industry. LeMay merely used those two constraints and altered his battlefield tactics to accommodate the situation. LeMay states it this way:

Let me emphasize that this (firebombing) was not a deliberate deviation from precision to area bombing. We only hit areas where enemy war making capacity was spread over larger areas, as in cottage industries surrounding factories or when weather forced us into radar bombing, visual precision being impossible. (7:xvi)

LeMay was merely acting within the ACSC strategy process model to arrive at a war winning battlefield strategy. The end strategy was indeed different but the method to arrive at a strategy was indeed the same. Most important, the strategies used by General LeMay produced war winning results.

BIBLIOGRAPHY

Books

1. Anders, Curt. Fighting Airman. New York: G.P. Putnam's Sons, 1966.
2. Arnold, Henry H., General (Ret.). Global Mission. New York, N.Y.: Harper & Brothers, 1949.
3. Birdsall, Steve. Saga of the Superfortress. Gardes City, N.Y.: Doubleday & Company, Inc., 1980.
4. Candee, Marjorie Dent, (ed.). Current Biographies, Who's Who and Why, 1954. New York: H. W. Wilson Company, 1954.
5. Clausewitz, Karl von. On War. Edited and Translated by Howard & Paret. Princeton, N.J.: Princeton University Press, 1976.
6. Cortesi, Lawrence. Target Tokoyo. New York, N.Y.: Kensington Publishing Corporation, 1983.
7. Craven, Wesley Frank, and Cate, James Lea. (eds.). The Army Air Forces in World War II, Vol. I, Plans and Early Operations, January 1939 to August 1942. Chicago: University of Chicago Press, 1948.
8. Craven, Wesley Frank, and Cate, James Lea. (eds.). The Army Air Forces in World War II, Vol. V, The Pacific: Matterhorn to Nagasaki, June 1944 to August 1945. Chicago: University of Chicago Press, 1953.
9. Gaston, James C. Planning the American Air War. Fort Lesley J. McNair, Washington D.C.: National Defense University Press, 1982.
10. Gurnsy, Gene, Major USAF. The B-29 Story-The Airplane That Won The War. Greenwich, Conn.: Fawcett Publications, 1961.

CONTINUED

11. Hansell, Haywood S., Jr., Major General, USAF (Ret.)
Strategic Air War Against Japsn. Maxwell AFB, AL.:
Airpower Research Institute, 1980.
12. Hansell, Haywood S., Jr., Major General, USAF (Ret.) The
Air Plan That Defeated Hitler. Atlanta, GA:
Higgins-McArthur/Longino & Porter, Inc., 1972.
13. Hansell, Haywood S., Jr., Major General, USAF (Ret.) "Air
War Planning: USAAF Plans & Strategic Effects",
Impact Vol. 4 New York, N.Y.: Parton and Company,
Inc., 1980.
14. Jablonsi, Edward. Flying Fortress. Garden City, N.Y.:
Doubleday & Company, Inc., 1965.
15. Lay, Beirne, Jr., Colonel USAF (Ret.). "Destroying the
Enemy's War Resources: The Background", Impact
Vol. 5. New York, N.Y.: Parton and Company, Inc.,
1980.
16. LeMay, Curtis E., General (Ret.). with Kantor, MacKinley.
Mission With LeMay. Garden City, N.J.: Doubleday &
Company, Inc., 1965.
17. LeMay, Curtis E., General (Ret.). "Destroying the Enemy's
War Resources: The Command Realities.", Impact
Vol. 5. New York, N.Y.: Parton and Company, Inc.,
1980.
18. Morrison, Wilbur H. Point of No Return. New York, N.Y.:
Times Books, 1979.
19. Webster's American Military Biographies. Springfield,
Mass.: G & C Merriam Co., 1978.
20. Webster's Third New International Dictionary.
Springfield, Mass.: G & C Merriam Co., 1966.

CONTINUED

Articles and Periodicals

21. Eaker, Ira C., Lt. General, USAF (Ret.). "Lt. General Frank M. Andrews, Air Force Magazine. September 1980, pp. 102-104.
22. Hansell, Haywood S., J., Major General, USAF (Ret.). "The Air Plan That Defeated Hitler", Air Force Magazine. July 1980, pp. 106-113.
23. Huie, William B. "The A-Bomb General of Our Air Forces", Coronet. October 1950, pp. 87-91.
24. Macisaac, David, Major USAF, "What the Bombing Survey Really Says", Air Force Magazine. June 1973, pp. 60-63.
25. Strum, Ted R. "The Man and The Strategist", Airman. 9:4-11 February 1965.
26. "World Battlefronts: V.L.R. Man", Time, August 13, 1945, pp. 22-25.

Official Documents

27. Hq, Army Air Force, Washington, D.C. "AWPD/1, Munitions Requirements of the Army Air Forces to Defeat Our Potential Enemies". 12 August 1941, 145.82-1, in USAF Collection, AFSHRC.
28. Hq. Army Air Force, Washington, D.C. "AWPD/4, Air Estimate and Recommendations for the Conduct of War." 15 December 1941. 141.82-4 in USAF Collection, AFSHRC.
29. Hq, Army Air Force, Washington, D.C. "AWPD/42, Requirements for Air Ascendency". 9 September 1942. 145.82-42 in USAF Collection, AFSHRC.

CONTINUED

Unpublished Materials

30. Snow, Dr. Donald A. & Drew, Dennis M., LT. Colonel, USAF.
Introduction to Strategy. Maxwell AFB, Al.: Air
Command and Staff College, 1983.

B. Related Sources

Unpublished Materials

31. Munger, Robert A. Major, USAF. "Ira C. Eaker and Curtis
E. LeMay Great Warriors". Air Command and Staff
College, Maxwell AFB, Alabama, June 1983.