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BUILDING BLOCKS OF VICTORY: AMERICAN INFANTRY DIVISIONS
IN THE WAR AGAINST GERMANY AND ITALY, 1941-1945

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

by
Peter R. Mansoor, B.S., M.A.

* * * * *

The Ohio State University
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To the officers and soldiers of the Army of the United States, whose sacrifices made possible the victory of democracy over totalitarianism during World War II
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CHAPTER I
INTRODUCTION

The guns had hardly cooled after the Allied victory over Germany in World War II when both participants and historians began the debate over the relative merits of the armies that fought the war. As part of this larger controversy, the quality of American infantry became a topic of dispute and has remained so for nearly five decades. Why did the Army of the United States succeed against the Wehrmacht in World War II? Were American infantry divisions fighting in Europe effective combat organizations, or did they prevail through sheer mass? The historiography of this subject in the post-war era falls roughly into two schools of thought.

The first group, which includes many participants in the war, published extensively from 1945 to the late-1970s. The victors wrote numerous memoirs and histories, which set off a sometimes passionate debate between British and American authors over which nation made the most significant contributions to winning the war. Some of the best known works of this genre are Chester Wilmot, The Struggle for Europe, General Omar Bradley, A Soldier’s Story, Field
Marshal Bernard Montgomery, Normandy to the Baltic, General Dwight Eisenhower, Crusade in Europe, and Charles MacDonald, The Mighty Endeavor.¹

The second group form a revisionist school of historians who trumpet the virtues of the Wehrmacht. The situation facing both the North Atlantic Treaty Organization and the state of Israel in the 1970s and 1980s partly influenced these historians, who were interested in discovering how armed forces could fight outnumbered and win on the modern battlefield. The experience of the Wehrmacht in World War II, these authors contend, has more to offer the modern military professional than the experiences of the Allied armies, which they believe won victories solely through the overwhelming application of superior numbers and firepower. Some of the best known works of this group are Trevor N. Dupuy, Numbers, Predictions, and War, Max Hastings, Overlord, Martin van Creveld, Fighting Power, John Ellis, Brute Force, and Russell F. Weigley, Eisenhower's Lieutenants.²

A reaction to the revisionist claims of the Wehrmacht apologists began in the mid-1980s and continues to the present day. Without minimizing the contributions of Allied industrial prowess to victory in World War II, historians such as John Sloan Brown in Draftee Division, Goeffrey Perret in There's a War to be Won, Michael Doubler in Closing with the Enemy, and Stephen Ambrose in D-Day, June
6, 1944, contend that historians have underrated the fighting capabilities of the American army in World War II. Many historians have focused too heavily on the early struggles of the Army of the United States in World War II, such as the campaign in North Africa or the Normandy invasion, to the exclusion of later operations in 1944 and 1945, both in Europe and in the Pacific. Additionally, some historians have mistaken Allied mediocrity at the operational level of war for ineptitude at the tactical level—that is, division level and below. Due to decisions on allocation of resources made early in the war, American divisions operated with severe handicaps; nevertheless, nearly all American divisions developed into effective fighting organizations that overcame their foes on the battlefield.

The United States mobilized eighty-nine divisions during World War II, a decision based more on the belief that American industry could not give up more manpower to the military without suffering shortfalls than by any rational calculation of American needs on the battlefield. The official historian of the Army believes that the performance of its combat divisions on the field of battle in 1944-1945 "vindicated the bold calculation in Washington" not to produce more units. I disagree. One should not underestimate the achievement of the Army of the United States during World War II; the Army, in conjunction with
its sister services, did after all fulfill its mission of defeating the forces of Nazi Germany, Italy, and the Empire of Japan on the battlefields of Africa, Italy, France, Germany, and the Pacific. That achievement, however, should not blind one from observing that the victories won did not come cheaply, and the provision of more combat divisions to the overseas theaters would have resulted in fewer casualties over the course of the war.

The decision to cap the Army at ninety divisions had ramifications beyond whether or not the United States and its allies would win the war. The limitation on the number of divisions, when combined with the inability of President Franklin D. Roosevelt and his chiefs of staff to adhere to the "Germany first" strategy, resulted in a shortage of divisions when the western allies conducted their crucial campaign in France in 1944. This situation forced American commanders to keep their divisions engaged in battle more or less continuously during the campaign.

As weeks and then months passed, the combat effectiveness of American divisions rose and fell as they lost men to enemy fire, disease, cold weather injuries, and exhaustion, and integrated hundreds of thousands of replacements into their ranks. A greater number of divisions would have enabled American commanders to rotate units more frequently for periods of rest, refitting, and retraining, thereby reducing the rate of casualties. Due to
the ninety division gamble and the employment of nearly one-third of the Army in the Pacific, however, systematic unit rotation was impossible in the European Theater of Operations. American soldiers paid the price for the ninety division gamble from Normandy to the Huertgen Forest, the Ardennes, and the Rhineland.

Besides the numerical shortage of divisions, the performance of some American divisions, especially in their initial battles, left much to be desired. There were many reasons for the poor initial performance of these divisions, and high on the list is the quality of the personnel that the Army assigned to its combat forces. Until 1944, the Army Air Forces and Army Service Forces had first priority on draftees with high Army General Classification Test (AGCT) scores or who had civilian skills that matched the needs of the service forces. The result of this system was the siphoning off of the most qualified inductees into almost any type of organization other than infantry, armor, and field artillery units. Combat soldiers in the Army Ground Forces were not only less educated than their service support counterparts, but less physically qualified as well.\(^5\) By the time the War Department fixed the personnel selection system (if indeed it ever did), the Army Ground Forces had already mobilized and trained the majority of its combat divisions.
Training was another weakness in many American divisions, especially those mobilized after Pearl Harbor (with a couple of notable exceptions). These divisions suffered from high personnel turnover as the War Department shuffled soldiers around from one unit to another to meet the needs of the moment. Without personnel stability, training of divisions to combat readiness was difficult, if not impossible, before their introduction into combat. Other factors also accounted for poor training. Due to the huge expansion of the Army, many divisions lacked adequate leadership, particularly at the junior officer and noncommissioned officer level. Some of the best potential junior officers and noncommissioned officers ended up serving in non-flight positions with the Army Air Forces or participated in the Army Service Training Program until integrated as replacements—as enlisted soldiers—in 1944. Many field grade officers were incompetent or past their prime, a result of the slow promotion system during the 1920s and 1930s. In time new leaders emerged, but in the short run the newly formed divisions muddled through training as best they could.

Shortages of equipment also plagued the Army in 1942 and early 1943, and many units trained with equipment different from that with which they went into combat. Training facilities were initially inadequate, but expanded rapidly as the Army mobilized. On the whole, however, the
Army Ground Forces did not meet the goal of its commander, Lieutenant General Lesley J. McNair, of sending fully trained and combat ready divisions into combat. The certification of many divisions as combat ready was a paper drill that masked their inadequacies. Not that the War Department had much choice in the matter; by the end of 1944 the need for divisions in Europe was so great that the Chief of Staff, General George C. Marshall, sent Eisenhower every division left in the strategic reserve, regardless of its state of readiness.⁶

With so few divisions in the line, the War Department worked hard to keep them at full strength. The Army was able to avoid breaking up units for replacements, an expedient that plagued the American Expeditionary Forces in World War I. The Army trained approximately 2,670,000 enlisted men as replacements from 1941 to 1945, more than twice the number of men assigned to the eighty-nine combat divisions at the end of the war.⁷

Replacements can keep a division numerically at the correct strength, but the proportion of well-trained and combat experienced soldiers declines as minimally qualified replacements enter the ranks. This system causes the overall quality of a division to wane, and it will not perform as well in combat. As a result, the division suffers a higher percentage of casualties in subsequent battles, and requires still more replacements to keep it at
full strength. This vicious cycle is not the best way to manage the manpower of a nation, but given the decision by the War Department to cap the number of divisions at ninety, there was no other choice but to integrate individual replacement soldiers on a continual basis into the combat divisions, whether or not they were actively engaged in combat.

Army Ground Forces worked instead to improve the training and quality of the replacements sent overseas, with mixed results. How replacements fared depended to a great extent on how receiving divisions treated them. Men who had time to train with their units, learn survival skills from combat experienced veterans, understand their role in the team, and get to know their leaders had a better chance of surviving than those men who were thrust into the front line immediately upon arrival.8 The best divisions in the Army learned this lesson early and treated replacements accordingly.

Compounding the difficulties many divisions faced in mobilization and training was the fact that only a few of them received any combat experience before wading ashore across UTAH or OMAHA Beach on or after D-Day. The fierce battles of attrition in Normandy pitted mostly untested Allied divisions, backed by a healthy superiority of artillery and airpower, against understrength German units leavened with combat experienced leaders and possessing many
technologically superior weapons. The Allies prevailed by wearing down the German army in bloody fighting among the hedgerows, and then penetrating through the weakened German line with American armored and infantry divisions. The campaign was not pretty, but it was decisive.

The costly battle for Normandy has led in recent years to some revisionist thinking about the relative merits of the German and American forces that faced each other on the battlefield in 1944. While useful, these comparisons are to some extent misleading. Germany began its rearmament program in 1933 when Hitler came to power and enjoyed six years of peace in which to expand the 100,000 man Reichswehr, but even that rather luxurious time interval strained the competence of the force. The Wehrmacht seasoned its divisions in campaigns in Poland, Norway, France, the Balkans, Africa, and Russia prior to D-Day. The Germans suffered many casualties, but by June 1944 the Wehrmacht had weeded out the incompetent leaders and put combat veterans in command of its units. The Germans had an established, combat-tested tactical doctrine. Most German units had solid noncommissioned officer leaders and well-trained soldiers, kept in line through ideological indoctrination and rigid discipline. German equipment was among the most technologically advanced in the world, especially tanks and machine guns.
The Army of the United States lacked most of these advantages when compared to the Wehrmacht. American rearmament began in June 1940 after the fall of France, and within two and a half years the first American divisions engaged in combat in North Africa against an experienced enemy. One wonders how the German army would have fared if forced into combat against the French in the Rhineland in 1936 under similar circumstances. Indeed, historian Williamson Murray concludes that "in nearly every respect, the Wehrmacht was not ready" to fight a major war even as late as 1938, five years after the beginning of rearmament.\textsuperscript{10}

In World War II the United States rapidly produced an army of citizen-soldiers. Germany, on the other hand, had a long tradition as a military state which eased its rearmament problems. As Manfred Messerschmidt of the \textit{Militargeschichtliches Forschungsamt} states:

The hundred-year tradition of compulsory military service, with its wide impact on society, state, and mind, prepared the ground for the \textit{Reichswehr} and the \textit{Wehrmacht}. This preparation represented a major asset for Hitler's success in Germany's rearmament program and preparations for war. Without this background, the German military would have enjoyed nothing like the speed of its expansion between 1933 and 1939. This backbone of remilitarization counted far more than the mere totals of divisions, aircraft, or submarines.\textsuperscript{11}

Without this tradition of compulsory military service and obedience to the state, Americans struggled to form effective military units in a short period of time.
Inevitably, problems arose, but the fact remains that the achievements of the Army of the United States in combat in World War II far outweigh its understandable deficiencies. Few American divisions had received a baptism of fire before D-Day. Significantly, of those that had been in combat before (the 1st and 9th Infantry Divisions, the 82d Airborne Division, and the 2d Armored Division), all performed well in Normandy. The Army also still had to work out critical elements of its doctrine, such as anti-armor defense, at the unit level. American divisions lacked combat tested leadership, had not weeded out all of the incompetent leaders, and found training difficult due to the shortage of training areas in England.

Given these difficulties, the achievements of the American combat divisions appear in a different light. By the spring of 1945 the Army had largely overcome its handicaps and reached a high level of military effectiveness—superior to that of its enemies. A more balanced comparison of German and American forces would compare each organization at its zenith, say, the German army in 1941 and the American army in April 1945. I submit that one would be hard pressed to choose between the two forces on the basis of technical or tactical proficiency at the division level. Given the pernicious ideological bias of many German units, however, the choice would in fact be easy to make for the people of a democratic society. The
Army of the United States reached its zenith of combat effectiveness without the extensive ideological indoctrination and fear-based discipline that infused many German units with their will to fight.14

The foregoing discussion does not exonerate the Army of the United States from its faults, and it had many. The intent of this work is to bring some balance back into the debate about the combat effectiveness of American infantry divisions in World War II. Despite the problems that the Army faced during its greatest period of expansion and the self-imposed handicap of the ninety division gamble, many divisions developed into superb fighting organizations. Historians have yet to explore fully this development, although John Sloan Brown has taken a healthy step forward with his study of the 88th Infantry Division. An examination of other successful divisions will help to isolate those factors which proved critical to the development of combat effectiveness in the American army between 1940 and 1945, and put the achievements of the American soldier back into their rightful place in history.

Part of the problem with analyzing combat effectiveness is in defining the term. The German army fielded units that could perform in outstanding fashion at the tactical level, but the Wehrmacht failed as a fighting organization because of its numerous deficiencies in other areas such as strategy, logistics, intelligence, and joint operations. As
a minimum, combat effectiveness encompasses the following imperatives:

- leadership
- discipline
- morale
- unit cohesion
- doctrine (use of the combined arms team)
- technology (weapons and equipment)
- ability to adapt (a "lessons learned" system)
- training (before, during, and after combat)
- command and control (agility)
- use of intelligence
- ability to maneuver
- fire support (artillery, close air support, naval gunfire)
- ability to conduct joint (interservice) operations
- ability to sustain effort over time (personnel policies and logistics)

German units could maneuver well and generally had excellent leadership, discipline, morale, unit cohesion, and training. The American army's strengths lay in its ability to adapt, use of intelligence, fire support, joint operations, and its ability to sustain the effort. What many critics of the Army of the United States fail to recognize is that its "tail," the combat service and combat service support organizations which comprised the majority of the force, was a large part of what made the American army the most combat effective organization in World War II over the long run.

Historians have pinpointed the abundance of American industrial resources as a major reason for the victories of the Allied armies in battle. The sheer magnitude of American industrial mobilization may cause one to overlook the quality of the end product. The success of American divisions on the battlefield, however, was no accident. The
Army of the United States contained a solid core of senior leaders who trained their units hard and learned from their mistakes. After an initial period of turbulence, most divisions eventually settled down into stable organizations. The best units used their time out of the line wisely to train and inculcate lessons learned from combat. Unfortunately, only airborne divisions routinely received all of the personnel and training resources they needed before conducting active operations. Nevertheless, after the Battle of the Bulge casualties abated and most divisions reached a high level of effectiveness, which they retained as they maneuvered to dismember the disintegrating Wehrmacht and overrun the ashes of the Third Reich.

Divisions fighting in the Pacific did not suffer the same problems as those fighting in Europe and the Mediterranean. In *Eagle Against the Sun*, Ronald H. Spector states: "Combat in the Pacific was usually, but not always, characterized by short periods of intense fighting followed by long intervals of waiting. One army division which spent nineteen months in the Pacific had thirty-one days in combat. Another, which had been there for twenty-seven months, saw fifty-five days in combat. By contrast, American troops in the European theater often spent months on the battle line." These long periods out of combat were responsible for the increased combat effectiveness of army divisions employed in the Pacific, for time was
available between operations to digest lessons learned, correct training weaknesses, and integrate replacements. Although combat in the Pacific took its toll on the participants, the policy of keeping soldiers in the theater for the duration of the war had a positive impact on the quality of their units. Extensive periods of training between combat operations made the divisions of the Army and Marine Corps in the Pacific truly formidable instruments in the bloody business of killing Japanese soldiers in their island fortresses.

Despite its late and hasty mobilization, the Army of the United States was able to develop combat effective divisions that defeated their enemies on battlefields around the world. A handful of divisions were superb near the beginning of their introduction to combat; others took several months to develop into good organizations. Even the 90th Infantry Division, which had such a rough time in Normandy, eventually developed into a fine combat organization after several changes of senior leadership. By the spring of 1945, American divisions had enough time and combat experience behind them to reach a level of effectiveness that enabled them to defeat their foes from Germany and Japan. They had proved that American combat divisions could fight effectively on the battlefield and win. The American people asked of them nothing less.
ENDNOTES


7. Keast et al., The Procurement and Training of Ground Combat Troops, 177.

8. Ibid., 230.

10. Ibid., 222.


15. See, for instance, Ellis, Brute Force, 440; Weigley, Eisenhower's Lieutenants, 729-730.

CHAPTER II
THE MOBILIZATION OF THE ARMY OF THE UNITED STATES

The creation of the armed forces of the United States that played such a large role in the victory of the United Nations over the Axis powers was one of the greatest achievements in the history of the American Republic. Of the twelve million men and women who served in the armed forces in 1945, over six million served in the ground forces of the Army of the United States, which centered its efforts on fielding combat divisions capable of defeating the forces of Italy, Germany, and Japan on battlefields literally oceans apart. Another two million served in the Army Air Forces, which fought a strategic air campaign against Germany and Japan and supported the Army's ground forces in theaters across the globe.

The manner in which the War Department manned, organized, and trained combat divisions was critical to the development of military effectiveness in the Army of the United States during World War II. The critical factor was time, which was in short supply after Pearl Harbor. Due to the chaotic mobilization of the Army for war, many American combat divisions did not reach a high level of military
effectiveness until after they had taken large losses in combat. Time and manpower limitations forced the Army to rely heavily on other sources of strength, such as firepower in the form of artillery and airpower, logistical plentitude made possible by the industrial capacity of the United States, and the national characteristics of the American soldier, who triumphed despite adversity in theaters of war spanning the globe. Despite the successes of the mobilization system within the United States during World War II, many divisions entered the combat arena deficient in the cohesiveness, teamwork, and skills that make a unit successful in battle.

The quick and decisive German victory over France in May-June 1940 shook the United States out of its peacetime complacency. In the summer of 1940 the tactical units of the Army of the United States existed largely on paper. The Regular Army consisted of eight understrength infantry divisions, one cavalry division, and one mechanized cavalry brigade. The eighteen divisions of the National Guard were poorly trained and manned. Field training of larger units, such as corps and armies, consisted of command post exercises and map drills. The Louisiana maneuvers of 1940, which took place during the fall of France, were the first large scale field exercises held in the United States, but they served mainly to highlight the weaknesses of the Army. In 1940 the Army needed dramatic expansion and
improvement before it could match the awesome combat power of its potential adversaries.

After the fall of France the War Department and the Roosevelt administration took several steps to improve the military readiness of the United States. On 10 July the War Department created a separate Armored Force in order to free the development of armored units and doctrine from the shackles of branch parochialism. On 26 July the War Department activated a General Headquarters (GHQ) under the command of the Army Chief of Staff, General George C. Marshall. GHQ controlled the four armies in the continental United States, GHQ Aviation, harbor defense troops, and the newly created Armored Force. GHQ was responsible for training field forces for combat. Marshall chose the Commandant of the Command and General Staff School, Brigadier General Lesley J. McNair, as the chief of staff for GHQ. Since Marshall's duties as the Army Chief of Staff precluded his constant supervision of training, he gave McNair almost total control over GHQ. The establishment of GHQ was another step in transforming the peacetime Army into an effective wartime force.²

No other officer had as much influence in the development of American combat divisions in World War II as Lesley J. McNair. He was a member of the United States Military Academy Class of 1904 and was ranked 11th in his class of 124. During World War I McNair earned the
Distinguished Service Medal (awarded personally by General John J. Pershing) for his work as the senior artillery officer of the training section of General Headquarters of the American Expeditionary Forces. McNair and Marshall knew each other well from service together in World War I. McNair had been instrumental in the tests of the triangular division in 1937 before taking over as Commandant of the Command and General Staff School at Ft. Leavenworth. He was a rising star in the interwar Army, but did not seek the spotlight. He was soft-spoken and a first-class workaholic.³

General McNair put his imprint on almost everything the Army did in the United States in World War II. He favored small staffs as inherently more efficient than large ones. A year after the activation of GHQ, his staff numbered a grand total of twenty-three officers, but these men managed an army that numbered over a million men at the time. Incurring the wrath of the branch chiefs, McNair insisted on the same basic training for every soldier in the Army, regardless of eventual assignment. He spent more than half his time in the field and flew more than 200,000 miles in four years on a DC-3 to visit units in training. McNair championed the tank destroyer, one of the few doctrinal changes he got wrong. He died from friendly bombing during the Normandy campaign at the front, while observing the soldiers he had trained go into battle.⁴
The Army that invaded the continent of Europe was light-years away from the Army of 1940. McNair's task was gargantuan. The Selective Service Act of 1940 provided large numbers of men for the Army, but magnified the already troublesome problem of creating combat effective units. The authorized strength of the Regular Army increased from 227,000 men on 13 June to 375,000 men on 26 June. The President brought the National Guard into federal service on 16 September. By 1 July 1941, the Army had reached a strength of 1,326,577 men. GHQ consisted of twenty-seven infantry divisions, four armored divisions, and two cavalry divisions, divided into nine corps and four armies. The Army held the first maneuvers pitting two armies against each other in Louisiana and the Carolinas in the summer and autumn of 1941.

This expansion did not come without a price. One of the fundamental problems GHQ faced was the dichotomy of its mission, which entailed both readying existing forces for combat and creating new forces from scratch. Training had to take place simultaneously with the vast expansion of the Army, which led to inevitable turmoil. Newly activated units drew much of their cadre from existing divisions, and the loss of these men lowered the readiness of the veteran units. Nearly every division sent overseas in 1942 had experienced significant personnel turnover in the months prior to deployment and thus entered combat with a less
cohesive organization. Given the huge expansion of the Army, there was no immediate solution to this personnel turbulence. The Army had to spread its scarce professional officers and noncommissioned officers around to take the lead in organizing and training new units. The largest single problem the Army faced in its expansion was the lack of adequate officer and noncommissioned officer leaders. Many junior officers and noncommissioned officers lacked confidence; senior officers lacked experience in handling large units. A large proportion of National Guard officers (and many Regular Army officers as well) were overage or unqualified for the positions they held. After observing one Guard division in training, McNair found the Chief of Staff and the G-3 unqualified for their positions. "The blind leading the blind," McNair remarked. The problem involved contradictory needs: to provide adequate numbers of leaders for the force while at the same time eliminating many leaders unfit for positions of responsibility. The lack of adequate leadership explains the reason why GHQ decided upon a centralized training process which took many of the decisions on training out of the hands of small unit leaders. After one training inspection, McNair disparaged, "We have verified the inevitable--that inadequately trained officers cannot train troops effectively."
To add to the turmoil, the Army changed the organization of every type of division in the force at least once after 1940. The Army converted infantry divisions from a "square" structure, with two brigades of infantry (each containing two regiments), to a "triangular" structure, which eliminated the brigade headquarters and grouped three infantry regiments directly under division headquarters. The intention of the Army was to add flexibility to the infantry division by reducing a step in the chain of command, but it did so at the expense of staying power (due to the reduction by 25 percent of the number of riflemen in the division). The nine Regular Army infantry divisions officially converted to the triangular structure on 1 October 1940, but the eighteen National Guard divisions retained the square structure until early 1942.10

By late 1941 the Army had come a long way since the fall of France, but its divisions were still incompletely trained and equipped. The Louisiana and Carolina maneuvers showed the weakness of tactics, techniques, and leadership at the small unit level. They also displayed the weakness of many senior officers in controlling large units on the battlefield. GHQ ordered remedial training for all units after the conclusion of the maneuvers, especially on unit skills below battalion level.11 Unfortunately, the expansion of the Army after Pearl Harbor made small unit training a priority behind the mobilization of new units.
The result was constant turmoil at the small unit level that had an adverse impact on the performance of the Army of the United States in its first battles overseas.\textsuperscript{12}

The entry of the United States into the war on 7 December 1941 forced the War Department to accelerate an already rapid expansion of its strength. On 9 March 1942 the War Department reorganized itself for a multi-front war. The War Plans Division of the War Department assumed the planning and operational functions of GHQ. The reorganization dissolved GHQ, and created the Army Ground Forces (AGF) and Services of Supply (later redesignated as the Army Service Forces). AGF, under General McNair, continued the training function of GHQ, and became the agency responsible for the organization and training of units for deployment overseas.\textsuperscript{13}

The War Department planned to activate three to four divisions per month beginning in March 1942 until it met the desired end-strength, although at this stage in the war no one was certain how many divisions the United States needed to defeat its enemies. To speed up the process of mobilization of new units, the War Department bypassed the centralized replacement training centers for the basic training of draftees. Instead, inductees reported directly to their new divisions, where officer and noncommissioned officer cadre trained them under the guidelines of the Mobilization Training Plan (MTP). The goal was to prepare a
new division for combat within ten to twelve months of activation.¹⁴

In January 1942 GHQ published a plan for the creation of new divisions, and AGF largely followed this plan throughout the war. Largely the creation of McNair's G-3, Brigadier General Mark W. Clark (who earned a Distinguished Service Medal for his efforts), the plan was a flowchart that guided the organization and training of divisions from their activation until their deployment to a port of embarkation. The initial step was the designation of the cadre for the new division. Clark (who was an infantryman) would work with the Chief of Infantry to select candidates to be infantry division commanders and assistant division commanders, while McNair (who was an artilleryman) would select the candidates to be division artillery commanders. General Marshall would make the final choices from the list of nominations submitted by AGF. Once the War Department had confirmed the division commander, Clark would call the nominee in and get his input on key staff selections. McNair then chose the general staff section heads and key infantry and artillery officers. The Services of Supply (later Army Service Forces) chose special staff officers and commanders of special units (medical, quartermaster, ordnance, transportation, signal, etc.). Army and corps commanders chose other officer cadre.¹⁵
The bulk of the junior officers for the new unit came from the officer replacement pool, which by 1942 consisted mostly of graduates from officer candidate schools. A "parent" division provided trained enlisted cadre for the new division. The quality of the enlisted cadre depended on the professionalism of the commander of the parent division, who was supposed to give up his best men, but who often used the assignment of cadre as an opportunity to "clean house" and eliminate undesirable men from his unit. The total cadre numbered 172 officers and 1,190 enlisted men, but by August 1942 the War Department increased the number of cadre to 216 officers and 1,460 enlisted men to provide more specialists to the new division (especially motor transport officers and mechanics).¹⁶

The cadre received two to three months of training prior to the activation of the division. The division commander and his general and special staff officers attended a month-long course at the Command and General Staff School at Fort Leavenworth, Kansas. The assistant division commander attended a special course at the Infantry School at Fort Benning, Georgia, and the artillery commander attended a special course at the Field Artillery School at Fort Sill, Oklahoma. Separate unit commanders went to the appropriate branch school (infantry, artillery, engineer, quartermaster, medical, signal, cavalry). After this initial schooling, the cadre traveled to their new duty
station, where the enlisted cadre and the remainder of the officer cadre joined them about three weeks prior to the arrival of the draftees.17

The new division spent the first two weeks organizing units and arranging the divisional living area. By then, hopefully, a complement of training equipment comprising 50 percent of the Table of Basic Allowance had arrived so the division could begin basic training. The division used the War Department Mobilization Training Programs (MTP's) as guides to provide a weekly breakdown of training. The division spent the first seventeen weeks in basic and advanced individual training, followed by a test conducted by the army or corps staff. The division spent the next thirteen weeks in unit training, from company through regimental level. The army or corps would test selected units at the completion of this phase. During the next fourteen weeks, the division conducted combined arms training, in which regimental combat teams or the entire division would train in large-scale exercises. The army or corps would again test selected units at the completion of this training. The plan devoted the final eight weeks of training to coordination with aircraft and mechanized forces, and a review of selected topics. Training was progressive, and units were to repeat any training found wanting by the army or corps staffs. If all went well, by the end of the first year the division was ready to
participate in large scale, multi-division maneuvers, at the conclusion of which the War Department would designate the division as combat ready.18

Unfortunately, divisions rarely met this optimistic timetable. Personnel turbulence severely disrupted the training of divisions. The War Department decision to have divisions, rather than replacement training centers, train draftees in basic skills meant that the process of selecting the best of these new men to attend officer candidate schools, specialist schools, the Army Specialized Training Program (ASTP), or to transfer to the Army Air Forces occurred during the middle of the division's training cycle. As the best of the new soldiers departed, the recently formed division lost a valuable source of noncommissioned officers, and the unit gradually became understrength. The provision of new, untrained personnel who arrived at spasmodic intervals to fill the division's shortages disrupted the training cycle. The War Department many times waited until the division prepared for overseas deployment before filling it to full strength. Divisions in training also lost men to provide cadres for newly activated units, or to fill the need for replacements overseas. As a result, many divisions had to repeat training or deployed with a significant percentage of men who had not trained with their comrades, who did not recognize their leaders, and who did not identify with their new unit.19
Lack of equipment and ammunition also hampered the training of new divisions. American industry produced limited quantities of new weapons as it geared up for war. The provision of equipment to Great Britain and the Soviet Union under the Lend-Lease act siphoned off much of the modern equipment that was available. Ammunition was in especially short supply, which limited the amount of live fire training that units could conduct. Many divisions lacked adequate training facilities, or units had to spend time building facilities before they could begin training.

Equipment and ammunition shortages eased somewhat by 1943, and training improved. The combat experience gained by the Army in North Africa had a positive effect on training, and the AGF attempted to make training more realistic. McNair sent AGF observers out to North Africa to observe combat first-hand. They reported back that AGF training could never be too realistic. AGF responded in February 1943 by mandating training courses in infiltration, close-combat firing, and city fighting. These courses featured movement over realistic, war-scarred terrain, the use of live ammunition (both by the men in training and around them to provide realism—machine gun bullets whistling overhead, explosives set off nearby, and overhead artillery fire), and a variety of surprise and moving targets at varying distances. Tanks were to run over men in field entrenchments; training was not to be restricted by
unnecessary safety precautions. The applicable directive stated that "troops should be trained to the point that their final attitude toward tanks, planes and battlefield noises is one of fighting confidence." During McNair's tenure as head of AGF, his units used 240,000 tons of ammunition just to familiarize troops with the sounds of battle.

The AGF further improved maneuver training by converting the Desert Training Center in the Mohave Desert into a model theater of operations for corps level exercises. The AGF cycled twenty divisions through the area in 1943 for thirteen weeks of intensive training under realistic combat conditions. Fortunate indeed were those divisions that went to the California-Arizona maneuver area for this training, as their performance in combat attests.

Unfortunately, conditions in 1944 relapsed into the confusion of 1942. The AGF had to close the California-Arizona maneuver area in April 1944 due to the lack of service units to support divisions in training. The AGF also canceled large-scale maneuvers due to the accelerated shipment of divisions overseas as the crisis of 1944 hit the European Theater of Operations. Thirteen divisions never participated in division level maneuvers; as a result, the first time the commanders of those units had a chance to maneuver their force as a whole was in combat. Of even
greater concern was the stripping of divisions for replacements, an issue explored more fully below. The experience of the 260th Infantry Regiment of the 65th Infantry Division was not atypical of the personnel turbulence many units experienced in training:

The turnover of commissioned personnel in this regiment since activation has been about 150 percent. The turnover has been heaviest among junior officers, principally among the lieutenants. Some companies have had as many as seven commanders and some platoons have had sixteen leaders. Battalions have had as high [sic] as five commanders. The regiment has had two commanding officers.25

The results of all the efforts of AGF over the three years of mobilization were disappointing. While all divisions received a year or more of training, many had turned into nothing more than training establishments for replacements. By the time these divisions deployed overseas, they "were to a regrettable [sic] extent crazy-quilt conglomerations hastily assembled from sundry sources, given only a minimum of training, and loaded on transports."26 They suffered in combat accordingly.

Even the best units suffered a degradation in combat readiness while moving overseas. "Preparation for Overseas Movement," or POM, was the Army's term for bringing units to a final state of combat readiness, moving them to a port, and loading them on transports for shipment overseas. The system, especially in 1942 and early 1943, was chaotic. Due to chronic shortages of personnel and equipment, most units
received a healthy slice of both men and equipment only after they reached their port of embarkation. Most of the new men were only partially trained, and units had to integrate them as best they could.\textsuperscript{27} The equipment delivered to the port at the last moment was often of a different type than the division had used in training. As a result, men trained in the use of carbines sometimes found themselves with 1903 Springfield rifles, and when the Services of Supply issued the new anti-tank rocket launcher to the troops in Task Force A participating in the invasion of North Africa, no one had ever seen the weapon before or knew how to use one.\textsuperscript{28}

Due to the provision of new personnel and equipment at staging areas near the ports, divisions turned these areas into training establishments to acquaint men with new equipment, put replacements through firing courses, and to maintain the training of units. Because of lack of shipping or poor scheduling, some divisions spent months in staging areas that the War Department had designed to hold units for a few weeks at most. The training facilities were inferior to those at divisional home stations. The situation got worse when units embarked, for there was little space or opportunity to conduct training aboard the crowded transports. As a result, combat readiness of most divisions deteriorated between the time they left their home stations and the time they arrived overseas.\textsuperscript{29} Overseas theater
commanders tried to give newly arrived divisions time to train for a few weeks before occupying a sector of the front. If a division was really fortunate, it occupied a quiet part of the line, where the soldiers could gradually adjust to the rigors of combat. Some divisions, like the 106th Infantry Division which the Germans destroyed during the Battle of the Bulge, were not so fortunate.

The situation improved somewhat after the publication of a War Department directive on 16 January 1943 dealing with the organization, training, and equipment of units deploying overseas. Only replacements who had completed basic training and marksmanship courses could join divisions once they had left their home station. The Army Service Forces could not equip deploying units with new or different weapons from the ones the unit had used in training. The division was to spend no longer than two weeks in a staging area before embarkation. In practice, the Army did not always observe these restrictions, but the situation improved in relation to the earlier chaotic conditions.\(^{30}\)

The War Department never solved the problem of personnel turnover. Too many units deployed to staging areas with large numbers of partially trained men. The result was a frenzied effort, largely on paper, to qualify the men for overseas service at the last minute. The system sacrificed team building, cohesion, and effective training to bureaucratic requirements:
A common sight in almost any AGF camp in the spring and summer of 1944 was a group of lieutenants herding a batch of recent arrivals from the Army Specialized Training Program, low-priority units, or converted organizations through weapons-firing and combat courses so that they might be put down as 'qualified' and taken to port with the unit. Frequently these newcomers were so ignorant of tactics and so unaccustomed to firearms that the lieutenants dared not permit freedom of maneuver, but felt constrained instead to coach them through the exercises, with frequent admonitions to 'get back in line' and 'don't fire till I tell you.' Circumscribed to this extent, the well-conceived processing became an empty ritual.31

One does not have to look much further to understand why some American infantrymen initially lacked initiative in combat or failed to execute aggressive fire-and-maneuver when faced with opposition in battle.

Another reason for the lack of aggressiveness in American infantrymen was their lack of numbers. The ninety division gamble was a decision that cost the lives of numerous servicemen--primarily infantry replacements--in Europe in 1944 and 1945. Divisions were so scarce that American commanders routinely employed them at the front long past the point when they should have been withdrawn to retrain and integrate new replacements. The lack of divisions meant that units had to accomplish these tasks at or near the front, which resulted in a high rate of casualties among the new personnel. Some divisions literally fought themselves out in constant operations; even the best American divisions, such as the 1st and 9th Infantry Divisions, suffered from collective exhaustion when
they had been in the line too long. Additional divisions would have allowed for more frequent unit rotations, but due to a series of crucial decisions made by the War Department in 1943, by the end of 1944 no more divisions were available in the strategic reserve.

The "Victory Program" in the fall of 1941 projected an army of 215 divisions and 8,795,658 men at full strength.32 The author of the Victory Program, Major Albert C. Wedemeyer, assumed that the United States and Great Britain would have to defeat Germany without the help of the Soviet Union, which was on the verge of collapse at the time. When the Soviet Union proved its ability to remain in the war and tie down large numbers of German divisions, the Secretary of War Henry L. Stimson and General Marshall decided that the War Department could safely reduce the number of divisions in the wartime Army.33 In a memo to the Joint Chiefs of Staff (JCS) on 24 August 1942, Marshall proposed a force structure for the Army for 1943 of 7.5 million men organized into 111 combat divisions and 224 combat air groups. The intent was to create new units at a rate that would conform to estimated shipping capacity through 1944.34 On the same day, President Roosevelt requested the JCS to make an exhaustive study of the troop basis for 1943.

The JCS referred the issue to the Joint Planning Staff (JPS), whose report proposed a 1943 troop strength of
10,894,673 men (8,208,000 Army; 2,151,975 Navy; 360,215 Marine Corps; 174,433 Coast Guard). The planners ran into opposition from Paul V. McNutt, the Chairman of the War Manpower Commission, who estimated that the armed forces could induct no more than nine million men by 31 December 1943 without jeopardizing essential war production. The War Department estimated that 10.5 million men would be available by the end of 1943 and 13.5 million when the nation was fully mobilized. The planners considered the War Department figures on available manpower as more accurate:

In the final analysis the eventual number of men which must be mobilized in the Armed Forces is that number which is required to prosecute the war successfully and, regardless of how great this ultimate figure may be, the economy of the Nation must adjust itself to conform thereto.

The planners estimated that the Army could maintain 48 divisions overseas in 1943 and 88 in 1944, assuming a convoy turnaround time of 2 1/2 months and a loss rate of 2 percent. The planners did not believe that shipping capacity should govern the size of the Army, however. Divisions not shipped overseas in 1943 or 1944 could continue their training and enter combat in 1945 better prepared. "On the other hand," the planners concluded, "to have need for such divisions and not to have them available would represent criminal lack of foresight and would adversely affect the outcome of the war." The JCS approved the report of the JPS on 29 September and forwarded
it to the President. The following day, President Roosevelt approved the troop basis for 1943 as proposed by the JCS.\(^3\)

Despite the President's backing, manpower was clearly becoming a limiting factor in the mobilization of the armed forces. On 5 November 1942 the JCS met with Claude R. Wickard (Secretary of Agriculture), Donald M. Nelson, Paul V. McNutt (War Manpower Commission), Major General Lewis B. Hershey, Elmer Davis, and James F. Byrnes to discuss manpower shortages. The JCS showed Paul McNutt the approved troop basis for 1943, which he had not yet seen. McNutt said the 1.8 million man difference between the troop basis and what the War Manpower Commission considered the upper limit of acceptable military manpower "would be a matter of vital importance." General Marshall made several suggestions to alleviate the shortages, to include accepting more women into the armed forces and war industries, reducing interior guards within the United States, and adopting a longer work week for civilians. McNutt pointed to serious objections of some employers to hiring more women. Admiral Leahy stated that the best way to force the issue was to induct more men into the military and force industry to cope by hiring more women.\(^4\)

As the manpower pool dried up, the services fought vigorously to protect their allocations. On the whole, the Navy, Marine Corps, and Army Air Forces fared much better
than the Army in receiving manpower to fill their needs. The dominating size of the Army made it a tempting target for cuts, especially early in 1943 when public and Congressional opposition to increasing the size of the armed forces heated up. Manpower allocations were the subject of several Congressional hearings and numerous editorials during this period. To alleviate the criticism, the War Department undertook a public relations campaign to justify the Army's mobilization plan. General Marshall stated publicly:

There is a feeling in some quarters that we are building too large an Army—that we could not transport it to active theaters even if we had it—in short, the belief that we do not know what we are doing or where we are going. I realize that in a few quarters this reaction may be stimulated by an ulterior motive, a willingness to wave the flag but a reluctance to accept the hardships when the shoe pinches...The assumption that we have not even calculated our ways and means necessarily implies a serious doubt as to our competence to direct military operations.

In the end, Congress proved unwilling to alter the troop basis and risk public wrath in the event of defeat. Nevertheless, the public pressure caused the JCS to review the mobilization program.

The Joint Planning Staff met in April 1943 to begin planning the troop basis for 1944. The planners recommended stabilizing Army strength at its 1943 level, while the Navy, Marine Corps, and Coast Guard would increase to man ships under construction and to provide more amphibious forces in the Pacific. Unlike its previous report, the planners now
recognized shipping as a limitation on Army strength. The JPS forwarded its report to the JCS on 5 May 1943, but noted in the minutes of its discussion the increasing friction between the Army and Navy over manpower issues now that a ceiling had been reached. Indeed, a special Army committee noted a month later that "The Marine Corps has become essentially a land army and such an increase in strength, when the ground forces projected for the Army are being reduced or curtailed, cannot be reconciled."

General Marshall realized the Army had reached a crisis over the manpower issue. In May 1943 the Operations Division of the War Department formed a committee (Colonel Ray T. Maddocks, Colonel Edwin W. Chamberlain, and Lieutenant Colonel Marshall S. Carter) to review the current mobilization program and the projected number of combat divisions "in the light of the strategical situation with a view toward their downward revision, with proposals for preliminary checks on scheduled expansions." In its report, the committee stated that if the Soviet Union could continue to contain the major portion of German air and ground forces (a correct assumption) and if the Combined Bomber Offensive reduced the capacity of the German people for resistance (an incorrect assumption in 1943), then the United States would ultimately need 100 combat divisions and supporting units to defeat the Axis. The committee recommended that the Army Air Forces complete its 273
group program, but that the Army should freeze its mobilization at 88 combat divisions for the remainder of 1943. It recommended that the War Department defer the mobilization of the other twelve combat divisions until the first half of 1944 to "permit more orderly organization and training during the remainder of the year and afford opportunity to correct mistakes and deficiencies which now exist." Deferment of the twelve divisions would also reduce the time between the completion of their training and their introduction into combat.47 Marshall and Secretary of War Henry L. Stimson both approved the report, and the War Department published a lowered troop basis in July.

The committee report made sense in the short term. For instance, the decision to postpone the invasion of Europe until 1944 and to begin the Combined Bomber Offensive (Operation POINTBLANK) in 1943 meant that the Army needed fewer combat divisions and more air wings overseas in the early stages of the war. Combat divisions stacked up in the United States in 1943 and training space was at a premium. In the long run, however, once the War Department turned off its mobilization spigot, it could not turn it back on. The difficulties experienced by the AGF in completing the training of those divisions already activated, the increased tempo of operations in the Pacific, the formation of B-29 squadrons, and the shortage of replacements combined to doom the activation of any new combat divisions in 1944.48
After the Allies invaded Normandy, the shortage of infantry replacements further reduced the pool of available manpower.

General Marshall did what he could to remedy the shortage of troops. In February 1944 he cut back the ASTP to 30,000 men, and thereby released 120,000 high quality men for the Army. Marshall persuaded President Roosevelt to pressure the War Manpower Commission and Selective Service to reduce the induction backlog. Even then, the new personnel only backfilled vacancies in existing units; the Army ended the war with eighty-nine divisions (Table 1). As

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<td>1944-45</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TOTALS</td>
<td>67</td>
<td>1*</td>
<td>16</td>
<td>5</td>
<td>89*</td>
</tr>
</tbody>
</table>

*Does not include the Second Cavalry Division, which the War Department activated and deactivated twice.


As a result, the Allies faced the German army in France in 1944 with only a 1:1 ratio of combat divisions and virtually no strategic reserve. Industrial might in the form of
airpower, massive amounts of artillery, large numbers of technologically inferior tanks, and superior logistics would give the Army of the United States an advantage over the Wehrmacht in Europe, but only enough to secure victory at high cost. Maurice Matloff, one of the official historians of the Army of the United States, concludes:

It will long be a question whether the photofinish in World War II reflected an uncommonly lucky gamble or a surprisingly accurate forecast. But few would deny that, in their performance on the field of battle in the critical campaigns of 1944-45, the hitherto still largely untested divisions of the U.S. Army, so largely a product of General Marshall's own faith and struggles, vindicated the bold calculation in Washington.50

More than one historian disagrees with that conclusion. The formation of another fifteen to twenty combat divisions would have been a small price to pay to provide not just sufficiency, but overwhelming power in one of the most crucial military campaigns in the history of the United States. As Russell Weigley concluded, the creation of "a ninety-division army for the Second World War was not an altogether impressive performance for a superpower."51

The mobilization of divisions was not a linear process. The requirement to support an early invasion of Europe in 1942 (Operation SLEDGEHAMMER) or 1943 (Operation ROUNDUP) caused the War Department to activate a large number of combat divisions in 1942. After the Combined Chiefs of Staff made the decision to invade North Africa (Operation TORCH), execute the Combined Bomber Offensive against
Germany, and to postpone the invasion of Europe until 1944, the need for ground combat forces decreased in the short term. The extended Allied line of communication into the Mediterranean Theater of Operations (MTO) required a large number of service units to support a relatively small number of combat divisions in the theater. At the same time, the increased tempo of operations in the Southwest Pacific also required the activation of a large number of service units to support a small number of combat divisions.

By the time the Allies invaded Normandy on 6 June 1944, the Army of the United States had to provide service forces for five major theaters of operation: Europe, the Mediterranean, China-Burma-India, the Southwest Pacific, and the Central Pacific. Three of these theaters had little connection with the war against Nazi Germany. The inability of the United States to adhere to the "Germany first" strategy created a shortage of ground combat forces in 1944, when the United States committed its forces to the decisive campaign in western Europe.

In nearly every personnel decision made during the crucial months of mobilization after Pearl Harbor, the War Department cut the Army Ground Forces in favor of more service forces and air units. The total manpower of the Army grew much faster than the total number of divisions in the force (Table 2). Part of the explanation is the pooling of combat and combat support units above division level, but
TABLE 2
INCREASE IN ARMY PERSONNEL AND DIVISION STRENGTH, 1941–1945

<table>
<thead>
<tr>
<th></th>
<th>31 Dec 1941</th>
<th>31 Dec 1942</th>
<th>31 Dec 1943</th>
<th>31 Mar 1945</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Personnel</strong></td>
<td>1,303,231</td>
<td>3,796,959</td>
<td>5,186,083</td>
<td>5,848,573</td>
</tr>
<tr>
<td>% increase</td>
<td>191%</td>
<td>37%</td>
<td>13%</td>
<td></td>
</tr>
<tr>
<td><strong>Divisions</strong></td>
<td>36</td>
<td>73</td>
<td>90</td>
<td>89</td>
</tr>
<tr>
<td>% increase</td>
<td>103%</td>
<td>23%</td>
<td>-1%</td>
<td></td>
</tr>
<tr>
<td><strong>Percentage of Army manpower in combat divisions</strong></td>
<td>41%</td>
<td>29%</td>
<td>26%</td>
<td>23%</td>
</tr>
</tbody>
</table>

*Does not include the Army Air Forces.


Of even greater significance was the growth of the Army's service establishment. On 31 March 1945 the strength of the Army reached 8,157,386 officers and enlisted men.  

Subtracting the 2,308,849 men and women in the Army Air Forces and the Women's Army Corps, 5,848,573 men were serving in the Army at that time. Of these soldiers, only 2,711,969 (46 percent) served with combat, combat support, or combat service support units; the remainder belonged to service forces, training establishments, replacement depots, and other miscellaneous functions. The number of enlisted men assigned to the eighty-nine combat divisions did not differ significantly from the number of men assigned to the seventy-three combat divisions in existence in December 1942 (1,125,000 versus 1,056,000);
the War Department had increased the number of divisions by reducing their authorized strengths.\textsuperscript{55} To put it another way, of the 1,966,000 men added to the authorized strength of the Army after 1942, only 124,000 ended up in combat units.\textsuperscript{56} The percentage of men assigned to combat divisions dropped from 41 percent in 1941 to 23 percent in 1945.

Army Ground Forces recognized the problem, but could do little to solve it. After the War Department decision to cap Army strength in 1943 at eighty-eight divisions, General McNair wrote the Deputy Chief of Staff to express his concern:

In view of the limit now placed on the strength of the Army for 1943, and the relatively small augmentation in prospect for 1944, it is believed that the proposed distribution of manpower within the Army indicates a serious condition which warrants radical corrective action to effect the assignment of a much greater proportion of the manpower to units designed for offensive combat...

This condition appears to have developed from the initial widespread deployment of defensive forces and from the hurried organization of service units and establishments whose unavoidable lack of efficiency was reflected in a demand for an excessive number of units for any given task.\textsuperscript{57}

McNair made several suggestions to reduce the number of men needed to support each combat division, to include eliminating unnecessary anti-aircraft units, using civilian labor instead of army service troops wherever possible, reducing services in second and third line defensive bases and defense commands, and better control of theater requests
for services and overhead allotments. Despite his best attempts, however, McNair could not bring the situation under control.

The War Department abandoned the attempt to raise twelve more divisions in 1944 due to the increasing demands of the service forces and air forces for personnel. The War Department activated the last division (the 65th Infantry Division) in August 1943, and the Army had to make do with what it had from that point on. Even then the Army Ground Forces had difficulty in filling its units to full strength. Part of the problem was the sheer magnitude of the wartime undertaking; the War Department never could manage to reduce the amount of people listed as "overhead" and "miscellaneous." "I doubt," wrote General McNair in February 1944, "that the troop basis can be balanced because there is an insufficient allowance for the pipeline--the invisible horde of people going here and there but seemingly never arriving."58 On 30 June 1944, in fact, 456,032 enlisted men served in Zone of the Interior jobs within the United States, a number that exceeded the 445,007 men assigned as infantry soldiers in the Mediterranean and European Theaters at the time.59 The War Department had added men to the air forces, service forces, replacement organizations, training establishments, and the hospital population, but combat divisions received little of the three million man increase in end strength after 1942.
McNair emphasized offensive capability and flexibility; small, efficient staffs; the assignment of only those types of units that a division needed at all times, with all other types pooled at corps or army level; and as few links in the chain-of-command as possible.60 The overall impact of these ideas made American combat divisions in World War II flexible and mobile, but less resilient and more reliant on outside support.

Army divisions needed many attachments to function effectively in combat. By the end of 1944, 1,541,667 men served in nondivisional combat and combat support units (separate tank battalions, tank destroyer battalions, artillery battalions, engineer battalions, etc.) as compared to 1,174,972 men serving with combat divisions.61 One drawback to the pooling of nondivisional units at higher headquarters was the lack of unit cohesion that it engendered, since nondivisional units did not always train or operate with the same division. Corps and armies attempted to compensate for this by habitually assigning the same nondivisional units to support a specific division, but this was not always possible. McNair pooled nondivisional units because he did not think that every division needed these types of units at all times. The Army Ground Forces could therefore save manpower by creating fewer of them. During the campaign in France, however, commanders found out that every infantry division required the support of a
nondivisional (GHQ) tank battalion and tank destroyer battalion at all times, but there were not enough of these units to go around. The infantry divisions muddled through as best they could with what they got.

To squeeze the last ounce of manpower from the Army, the War Department on 2 October 1942 ordered the Army Ground Forces to streamline the tables of organization of the various types of divisions in the force. The goal was to cut the manpower of each division by 15 percent and the number of vehicles by 20 percent, without cutting combat power or forcing an alteration in doctrine for the employment of the Army in combat. McNair directed the work of the AGF Reduction Board, and the revised divisional structures bore the imprint of his ideas on combat organization.

The AGF Reduction Board sat from November 1942 to June 1943 and largely achieved its goals. The board cut personnel from the service and support echelons of the force and trimmed headquarters personnel. The board cut vehicles by providing more trailers for hauling bulk supplies. Complaints from the field about the severity of the reductions caused the War Department to restore some of the proposed cuts, but in July 1943 the War Department issued revised tables of organization for most units in the Army.62
The cuts of the AGF Reduction Board, as modified by the War Department, reduced the strength of the infantry division by 1,261 men (Table 3). The board slightly reduced the strength of the twenty-seven rifle companies that formed the heart of the division, but compensated by adding a fourth artillery battalion to the division. Since there were sixty-three infantry divisions in the force at the time the War Department issued the revised tables of organization, the total savings was 78,750 men, or enough to fill another five and a half infantry divisions. The board was less successful in cutting the number of vehicles in the division, which was not necessarily a drawback. The large number of vehicles enabled American infantry divisions to

### Table 3

**Authorized Strength of the Infantry Division, 1941-1945**

<table>
<thead>
<tr>
<th>Date</th>
<th>Strength</th>
<th>Rifle Co. Strength (27 Total)</th>
<th>Howitzers, 105mm</th>
<th>Howitzers, 155mm</th>
<th>Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Jun 1941</td>
<td>15,245</td>
<td>6,021</td>
<td>36</td>
<td>12</td>
<td>1,834</td>
</tr>
<tr>
<td>1 Aug 1942</td>
<td>15,514</td>
<td>5,346</td>
<td>36</td>
<td>12</td>
<td>2,149</td>
</tr>
<tr>
<td>15 Jul 1943</td>
<td>14,253</td>
<td>5,211</td>
<td>54</td>
<td>12</td>
<td>2,012</td>
</tr>
<tr>
<td>24 Jan 1945</td>
<td>14,037</td>
<td>5,211</td>
<td>54</td>
<td>12</td>
<td>2,114</td>
</tr>
</tbody>
</table>

dispense with horses, which the German army still used in great quantity. American infantry divisions could conduct rapid, mobile operations when necessary through the attachment of six truck companies.\textsuperscript{63} Even without attachments, infantry divisions could move quickly by shuttling their infantry forward in trucks taken from within the division organization (usually from the artillery). The infantry division as organized on 15 July 1943 remained basically unchanged until the end of the war.

The War Department did not use these economies in 1943 to activate new divisions. Instead, the Army used the manpower saved to redress existing shortages within divisions already activated and to create nondivisional and service units. The tanks and personnel released by the reorganization of the armored divisions, for example, ended up in independent tank battalions. These battalions finally became available in large enough numbers by early 1944 to allow some infantry divisions to begin combined arms training with tanks, training that the Army Ground Forces had mandated as "essential" as early as 20 May 1942.\textsuperscript{64} Unfortunately, the training was too little and too late. The First United States Army would invade Normandy woefully unprepared to fight a combined arms battle.\textsuperscript{65}

The War Department had to mobilize enough combat divisions to ensure victory, but it also had to ensure that those divisions were competent enough to win battles.
Unfortunately, many of the national manpower policies worked against the effort of the Army Ground Forces to improve the combat effectiveness of American ground combat units. Problems with the Selective Service System worked against the Army and in favor of the other services. Furthermore, in allocating the best portions of the nation's manpower that it received, the War Department consistently shortchanged ground combat divisions in favor of the Army Air Forces and Army Service Forces. Even for properly formed and trained units, flaws in the procedure for moving them overseas caused numerous problems for divisions about to enter combat. To maintain those divisions over extended periods of combat, the War Department operated a flawed replacement system that kept American units numerically at the correct strength, but which inhibited them from achieving and maintaining a high degree of combat effectiveness.

While the Selective Service Act of 1940 provided the required numbers of men for the military forces, not all arms and services fared equally in the distribution of the nation's manpower. In particular, the Army received a lower proportion of the high quality manpower than other services, and the combat divisions fared worse than the rest of the Army. Part of the problem was that until the end of 1942, many men opted out of the draft by volunteering for assignments with the Navy, Marine Corps, and Army Air
Forces. Most volunteers were of above average intelligence, and their absence from the draft lowered the overall quality of the pool from which the Army drew its manpower.66 Until 1944 the Army Air Forces received a higher percentage of inductees in Army General Classification Test (AGCT) categories I, II, and III than the rest of the Army. The non-combat branches of the Army Service Forces siphoned off those draftees who had established trades or skills in civilian life, and whose experience was useful to quartermaster, transportation, signal, military police, engineer, medical, and other types of units. These personnel were also mostly of high caliber.67 The problem was that infantrymen had no counterpart in civilian life.

A War Department Inspector General's report in November 1942 brought the issue of quality manpower to General Marshall's attention. One survey of 7,426 privates in the Army Air Forces found 2,717 (19.2 percent) of them to be either Category I or II. Of these privates, over half (1,561) served on "ordinary duty" (positions such as messengers, warehousemen, clerks, guards, orderlies, truck drivers, firemen, and cooks). The Inspector General recommended the use of quotas levied against the Army Air Forces to force reassignment of those privates with AGCT scores greater than 100 to Officer Candidate Schools for the Army Ground Forces and Army Service Forces.68 The Inspector General also noted that the Army rejected too many
inductees classified as "limited service" when their physical defects could either be treated (venereal disease, bad teeth, etc.) or compensated for in assignment.

In 1942 and 1943 over 150,000 of the brightest inductees participated in the Army Specialized Training Program (ASTP), which allowed them to begin or continue their college studies. Of those high quality men that remained, many left their units after a few weeks or months to volunteer for officer candidate school or aviation cadet training. During the most critical period of mobilization, therefore, the combat divisions drew their manpower from a pool already largely reduced at the top end (Table 4).

<table>
<thead>
<tr>
<th>Category</th>
<th>Ground Combat Arms</th>
<th>Army Service Forces</th>
<th>Army Air Forces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category I/II</td>
<td>29.7%</td>
<td>36.5%</td>
<td>41.7%</td>
</tr>
<tr>
<td>Category III</td>
<td>33.3%</td>
<td>28.5%</td>
<td>31.3%</td>
</tr>
<tr>
<td>Category IV/V</td>
<td>37.0%</td>
<td>35.0%</td>
<td>27.0%</td>
</tr>
</tbody>
</table>


Since officer candidates had to come from AGCT categories I or II, and most NCO candidates came from AGCT category II, the Army Ground Forces suffered from a shortage of qualified officer and noncommissioned officer candidates as the force expanded.
Certain divisions fared better than others. Those divisions mobilized before Pearl Harbor did not suffer the problems of manpower quality to the extent that many draftee divisions did after March 1942. In addition, the newly created airborne divisions received permission on 18 September 1942 to reduce the number of AGCT Category IV and V men in their units to the Army average. Since the Army average included the Army Air Forces and Army Service Forces, the airborne divisions ended up with a higher quality force than the Army Air Forces. All replacements for the airborne divisions were volunteers with better than average physical qualifications. The 10th Mountain Division, activated in 1943, also had a high number of intelligent and physically superior men. It drew the bulk of its manpower from the skiers and mountaineers of the Mountain Training Center, which had called for (and received) experienced outdoorsman-volunteers upon its formation in 1941.

Nevertheless, many divisions suffered from an acute shortage of leadership, a problem directly attributable to the inequitable division of the more intelligent and skilled portions of the nation's manpower pool. One of the Army official historians states:

From an initially limited and constantly depleted stock of men in the higher AGCT grades the Army Ground Forces had to meet its own requirements for officer candidates, for men to be sent to enlisted specialist courses at the service schools, for parachute volunteers, and for
cadremen for new units. Men remaining with their organizations were a very much picked-over lot. One commander observed in a moment of extreme discouragement that his hardest problem was to find competent enlisted men to act as instructors, because "everybody higher than a moron" had been pulled out for one reason or another.71

The inability or unwillingness of the War Department to fill its combat divisions with quality manpower reduced the effectiveness of the Army of the United States in its battles overseas. Only belatedly did the War Department come to this conclusion, and by that time there was little it could do to rectify the situation.

The War Department did what it could in 1944 to improve the quality of the manpower funneled into the Army's combat divisions. In February 1944 the War Department developed the "Physical Profile Plan," which classified soldiers on the basis of general stamina, upper extremities, lower extremities, hearing, vision, and emotional stability. Physicians graded soldiers from one (highest) to four (lowest) in each area. A one or two in all categories qualified the soldier for combat duty, a three limited the positions he could fill, and a four disqualified him from service. By June 1944 all reception centers, hospitals, and redistribution stations used the physical profile system in an attempt to send the fittest soldiers into the combat arms. Even so, the pool of available manpower had shrunk so much by this time that even with the physical profile system in place, the Army received five percent fewer men in AGCT
Categories I and II than in 1943. The War Department further nullified the effects of the system by prohibiting eighteen year old inductees from serving overseas. Only half the inductees at this stage of the war were over nineteen years old, and since the overseas theaters clamored for replacements, nearly all of the men in this age group found themselves trained as combat soldiers, regardless of physical ability. The War Department reversed its policy on the use of eighteen year old soldiers in combat on 1 November 1944, when the need for replacements became so great that it could not keep this age group out of the replacement stream. The physical profile system made little difference by then, since the War Department had to funnel 90 percent of inductees into the Army Ground Forces anyway, to make up for the casualties sustained by combat divisions—particularly infantrymen—overseas.

In 1944 the War Department also finally realized that such programs as the Army Specialized Training Program had become a luxury. In response to a memo from General Marshall, in February 1944 Secretary of War Stimson reduced the number of men in the ASTP from 150,000 to 30,000, and thus a high number of young, intelligent men became available to fill combat divisions that the War Department had gutted to send replacements overseas. With the invasion of France approaching, the War Department also reduced the aviation cadet training program to provide more
manpower for the ground forces. The transfer of these men had an immediate impact on the Army Ground Forces. Thirty-five divisions benefitted from an infusion of an average of 1,500 ASTP students each and twenty-two divisions each received an average of 1,000 aviation cadets. The divisions assigned the bulk of these men to the infantry, and training and morale—by no coincidence—soon improved.

The War Department also combed out about 200,000 enlisted men from the Army Service Forces and Army Air Forces in the Zone of the Interior in 1944 and 1945, and transferred them to the Army Ground Forces.

Unfortunately, the War Department had taken these actions too late. The transfer of men from the ASTP, aviation cadet program, and the Zone of the Interior service establishments improved the quality of the personnel in the divisions still in the United States, but these men had only a limited amount of time to train with their new units before deployment overseas. If the War Department had assigned these men to combat divisions in the first place, many of them would already have filled positions of leadership in their units. By 1944, the soldiers released from ASTP and other programs were just more "warm bodies" needed to fill gaps in the ranks. As matters stood, many qualified leaders ended up serving in their new units under less-qualified officers and noncommissioned officers.

Many ASTP soldiers rose to positions of leadership quickly
despite a late start. The 102d Infantry Division, for instance, received 2,750 ASTP soldiers before deployment; about one hundred of them eventually earned battlefield commissions after rising to noncommissioned officer leadership positions in battle.\textsuperscript{78}

One wonders how many more of these men would have assumed positions of leadership within their units if they had been assigned even earlier in the mobilization process. Had the quality and quantity of men that became available to the Army Ground Forces in 1944 and 1945 been available in 1942 and 1943, the combat divisions deployed overseas would have been more effective than they were. The inability of the War Department to focus its efforts on ensuring that a fair share of the highest quality draftees fought in combat units resulted in a shortage of good junior leadership in infantry divisions in the Army of the United States.

The problem of quality manpower extended to the issue of replacements. The quality and training of replacements was an acute problem for the Army Ground Forces throughout the war. Replacements received thirteen weeks (increased to seventeen weeks in mid-1943) of basic and specialized training at a replacement training center (RTC), then moved to a replacement depot for shipment overseas. Upon arrival in theater, the men stayed in another replacement depot until assigned to a unit. The amount of time spent at replacement depots and in transit after the conclusion of
training was variable, but could amount to several months. By the time a replacement soldier arrived on the front line, his physical condition had deteriorated and he had usually forgotten at least a portion of his training, which a unit could only inculcate by repeated drill. Some replacement soldiers did not even know how to fire their weapons,79 one factor that helps to explain S.L.A. Marshall's assertion that a minority of American soldiers fired their weapons in battle.80 If a replacement soldier was immediately assigned to a force engaged in combat, as often happened, he was likely to become a casualty before he proved of any value to his new unit.81

The Army had focused its efforts in 1941 and 1942 on building new units. Although it did not ignore the replacement issue, the capacity of the Replacement Training Centers was inadequate to keep pace with losses after Operation TORCH in November 1942. Three problems emerged. Initially, demand for replacements led to shipping of soldiers who had not been properly screened in the United States. Some units received replacements whom they had rejected as unfit for duty during the POM process. Second, theater replacement pools were not properly organized. As a result, men spent too much time sitting in depots instead of training, and widespread misassignments occurred. Major General Walton H. Walker, an AGF observer in North Africa, wrote on 12 June 1943: "At the present time, the most
pressing question with reference to replacements is the deterioration in the morale, discipline, training, and physical condition of men from the time they leave replacement centers until they arrive at their final destinations. Finally, AGF came to the late realization that thirteen weeks of training for a replacement was insufficient to prepare him for combat.

Theater commanders complained that enlisted replacements were unsatisfactory in regards to physical standards, discipline, and training. The theaters themselves were not blameless; Army Ground Forces inspection teams found widespread abuse of the replacement system overseas. The biggest problem was misassignment of replacements into specialties other than those for which they had been trained. Some replacements were used to activate new units (often service support organizations) in theater rather than to fill existing units to full strength. Nevertheless, AGF took action to improve replacement training by expanding it to seventeen weeks in the fall of 1943.

The quality of replacements improved somewhat as the war progressed, but successful divisions created effective systems to integrate new soldiers into units. The problem of inexperienced junior leaders plagued the Army to the war's end, ameliorated only somewhat through battlefield commissioning of experienced noncommissioned officers.
By the end of the war the United States had committed all but two of its ground divisions in combat. In Europe, commanders had kept most of them at the front without relief for extended periods of time. Extended fronts, continuous combat, and the lack of an organized system of relief or rotation strained the scarce combat resources of the triangular infantry divisions and small armored divisions. To make up for the lack of divisions, the War Department counted on the replacement system to keep American divisions at full strength. As the official Army historian states, "The replacement stream became in effect the reserve of the ground combat forces."\(^8^6\)

The individual replacement system had its drawbacks. A study conducted by the Surgeon General in the Mediterranean Theater in the spring and summer of 1944 concluded that the psychiatric casualty rate of men in infantry battalions could reach as high as 120 to 150 percent annually, compared with less than 3 percent in units of other arms.\(^8^7\) Prolonged exposure to the stress of combat and harsh field conditions, relieved only by death or wounds, cracked even the hardiest soldier, usually weakened by fatigue and nagging illnesses, if kept in the line for too long. Individual replacement of casualties as opposed to rotation of units aggravated this situation. Newly assigned replacements did not have an attachment to their units, did not know their leaders, and made many basic errors in combat
that usually led to their early demise. Individual replacements were much more effective if integrated into their units behind the front, put through a period of training, and given an opportunity to get to know their leaders and comrades before going into combat. The most effective way to accomplish these goals is to rotate units periodically out of the line. Only in the Pacific theaters did the Army achieve this optimum rotation system and then only by coincidence.

In World War I the United States opted to create large divisions and to keep them on the front for extended periods of time. Under the square structure, these large divisions had plenty of internal resources from which to draw in order to rotate men out of the trenches at regular intervals. In World War II the War Department, specifically General McNair, decided to create smaller divisions in order to increase their flexibility and mobility on the battlefield. The new division was a good organization, as long as army group commanders had enough divisions to rotate them out of the line at regular intervals for rest, retraining, and refitting. American commanders in Europe never had enough divisions for this purpose, and ended up keeping their divisions in the front too long. They took solace in the fact that the replacement system could keep the divisions at full strength, but this was of small comfort to the men who fought, suffered, and often died in combat.
Where could the Army have obtained additional manpower to create more combat divisions? The most unlikely possibility was that the War Department could convince the President and Congress to increase the share of national manpower allocated to the Army. General Marshall and Secretary of War Stimson did not do this, for they realized that an upper limit of about eight million men was all they could expect without disrupting the wartime economy or impinging on the needs of the other services. Another way was to economize within the Army structure to use manpower more efficiently. This was the purpose behind the AGF Reduction Board of 1943. The changes in the unit tables of organization did save manpower, but at the expense of combat divisions, not the fast-growing service establishment.

Other possibilities existed. The Army used over 300,000 women in non-combat roles and could easily have used more. Of the twenty-two million Selective Service registrants as of 31 December 1943, over six million received deferrals and nearly five million had been rejected on physical grounds. Hundreds of thousands of these men could have been used for limited service within the training and service establishments, thereby releasing more fit soldiers for combat duty. The Army could have done better in culling its bloated supply and service organizations, especially within the United States. The cancellation of the Army Service Training Program before it got started
would have ensured that high quality leaders would have been available to assume leadership positions within the Army when needed.

The Army never capitalized on the potential of African-American soldiers (then called Negroes or colored troops). Although the official policy of the War Department stated that colored troops would be inducted proportional to their percentage of the population, in fact the Army never reached the goal it set for itself in that regard (10.6 percent of Army strength). The 1943 Troop Basis provided for 416,898 Negro soldiers out of an Army total of 7,533,000 men, which on paper gave African-Americans equal representation in the service. In reality, the various major commands resisted the inclusion of more Negro manpower. As a result, African-American manpower in the Army remained below the target goal for the entire war (Table 5).

Racism was the predominant factor in the underutilization of minority soldiers in World War II. In 1943 the G-3, War Department General Staff, wrote to AGF: "To organize additional non-divisional combat units with Negro personnel will further reduce support already inadequate, since Negro combat units admittedly are not of the same quality as similar white units." This was an interesting statement, for at the time the Army had not yet employed an all-black unit in combat. The bias was equally as strong in the Army Service Forces, which wrote that the
TABLE 5
PARTICIPATION OF AFRICAN-AMERICAN SOLDIERS
IN THE ARMY OF THE UNITED STATES, 1941-1945

<table>
<thead>
<tr>
<th>Month</th>
<th>African-American</th>
<th>Total Army Strength</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec. 1941</td>
<td>99,206</td>
<td>1,685,403</td>
<td>5.88</td>
</tr>
<tr>
<td>Jun. 1942</td>
<td>178,708</td>
<td>3,074,184</td>
<td>5.81</td>
</tr>
<tr>
<td>Dec. 1942</td>
<td>399,454</td>
<td>5,397,674</td>
<td>7.40</td>
</tr>
<tr>
<td>Jun. 1943</td>
<td>555,176</td>
<td>6,993,102</td>
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</tr>
<tr>
<td>Dec. 1943</td>
<td>633,448</td>
<td>7,482,434</td>
<td>8.47</td>
</tr>
<tr>
<td>Jun. 1944</td>
<td>698,911</td>
<td>7,992,868</td>
<td>8.74</td>
</tr>
<tr>
<td>Dec. 1944</td>
<td>691,521</td>
<td>8,052,693</td>
<td>8.59</td>
</tr>
<tr>
<td>Jun. 1945</td>
<td>694,818</td>
<td>8,266,373</td>
<td>8.41</td>
</tr>
</tbody>
</table>


"efficiency of the Quartermaster service as a whole will suffer considerably and [it] will not be able to maintain its place in the team with the other services" unless the War Department reduced the numbers Negroes allotted to the branch.91 Again, this statement stands in stark contrast to the performance of African-American soldiers in Quartermaster units in France in 1944. The rejection rate for African-Americans at induction stations in 1943 was 53 percent versus 33.2 percent for whites.92 There is evidence to indicate that blatant racism was the cause of the higher rejection rate for African-Americans, which caused the shortfall in Negro inductees that year.93
By 1944, the War Department G-3 gave up its attempt to ensure that African-Americans were proportionately represented throughout the Army, to include service with combat units. From that point on, the Army used African-Americans primarily to man battalion-size or smaller combat service support organizations, with only a small representation in the combat and combat support branches. The meritorious service of African-Americans in the war in Europe shows that the Army seriously underestimated their potential during World War II. In listing the reasons for the critical manpower shortages in the Army in 1943 and 1944, one must include racism as a contributing factor.

The Army also expended too much of its manpower on certain types of units, such as tank destroyers and anti-aircraft artillery. The latter category alone claimed 557,000 men by the end of 1943. Since the attainment of air supremacy by the Army Air Forces was a pre-condition to a Cross-Channel invasion, one wonders if the need for anti-aircraft units was not overstated. In the campaign for France and Germany, 12th Army Group cannibalized many of these units for infantry replacements. Likewise, the need for tank destroyer battalions would have been eliminated had the Army paid attention to the lessons of the Eastern Front and North Africa and had armed at least a portion of its Sherman tanks with a 90mm gun, thereby allowing them to take
over the role of the poorly protected tank destroyers in combat.

Eighty-nine combat divisions were sufficient to defeat Germany without excessive casualties only if the United States had strictly adhered to the "Germany First" strategy as agreed to by the Combined Chiefs of Staff at the ARCADIA Conference in December 1941.96 The provision of more divisions to Europe would have proved instrumental in reducing the casualties suffered by Americans there. Although the United States could have conducted a scaled-back counteroffensive in the Pacific with the four Marine and nine Army divisions stationed there at the end of 1942, denuding the Pacific theaters of more combat divisions was not politically possible.97 Doing so would have released at least thirteen divisions for use in Europe, since by September 1944 the various Pacific theaters of operation had laid claim to twenty-one divisions.98 The curtailment of the dual-offensive in the Pacific would also have released large numbers of service troops for conversion to combat units.99

Politically, however, the "Germany First" strategy was unacceptable to the vast majority of Americans, who wished to punish Japan for the attack on Pearl Harbor. The provision of twenty-one Army divisions, in addition to six Marine divisions, to the Pacific left the American army in Europe barely adequate to complete its mission. The
increased combat burden on the infantry divisions fighting Germany led to the physical and mental exhaustion of the troops and increased casualties. The ambitious dual-drive in the Southwest and Central Pacific in 1944 allowed the United States to defeat Japan and Germany simultaneously, but at a cost. Americans sustained more casualties on the battlefield in Europe than they would have suffered had just some of the Pacific divisions been placed at Eisenhower’s disposal. The fighting soldiers paid the price--as usual.
ENDNOTES


2. Ibid., 6-7.


4. Ibid.


9. Ibid., 28.


14. Ibid., 52-54.


17. Ibid., 435-436.
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21. HQ, Second Army, 17 February 1943, Subject: Special Battle Courses, File 330-0.3.0, Box 8727, Record Group 407, National Archives, MMRB.

22. Kahn, McNair, 32.


24. Keast et al., The Procurement and Training of Ground Combat Troops, 471.

25. Ibid., 474.

26. Ibid., 482.

27. Ibid., 565.


29. Keast et al., The Procurement and Training of Ground Combat Troops, 574.

30. Ibid., 582-93; GNGCT 370.5/171, 19 February 1943, Subject: Preparation and Movement of Units for Overseas Shipment, File 330-0.3.0, Box 8727, Record Group 407, National Archives, MMRB.


34. Gen. George C. Marshall to JCS, 24 August 1942, ABC 370.01 (7-25-42), Record Group 165, National Archives.

35. Paul V. McNutt to JCS, 16 September 1942, ABC 370.01 (7-25-42), Record Group 165, National Archives. For an examination of the impact of the size of the Army on the labor force, see Bryon Fairchild and Jonathan Grossman, *The Army and Industrial Manpower* (Washington: Office of the Chief of Military History, 1959), 45-56.

36. Notes on JPS 36th Meeting, 23 September 1942, ABC 370.01 (7-25-42), Record Group 165, National Archives.

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39. JCS to President, 30 September 1943, Indorsement signed by F.D.R., ABC 370.01 (7-25-42), Record Group 165, National Archives.

40. JCS Memorandum for Information No. 33, 5 November 1942, ABC 370.01 (7-25-42), Record Group 165, National Archives.


43. JPS 57/8, 26 April 1943, Troop Bases for All Services for 1944 and Beyond, ABC 370.01 (7-25-42), Record Group 165, National Archives.

44. Notes on JPS 72d Meeting, 5 May 1943, ABC 370.01 (7-25-42), Record Group 165, National Archives.

45. Memorandum for Deputy Chief of Staff, 5 June 1943, Subject: "Troop Bases for all Services for 1944 and Beyond," ABC 400 (2-20-43), Record Group 165, National Archives.
46. WDCSA 320.2 (5-24-43), Subject: Revision of Current Military Program, ABC 400 (2-20-43), Record Group 165, National Archives.

47. "Revision of Current Military Program, Interim Report by Special Army Committee," 1 June 1943, ABC 400 (2-20-43), Record Group 165, National Archives.


49. Ibid., 376.

50. Ibid., 381.


52. Greenfield et al., The Organization of Ground Combat Troops, 170.

53. Ibid., 203.

54. Ibid., 170.

55. Ibid., 176.

56. Ibid., 175.

57. AGF 320.2/31 (Troop Basis 1943), 22 June 1943, 320.2, Record Group 165, National Archives.

58. Greenfield et al., The Organization of Ground Combat Troops, 235-36.

59. Ibid., 241-42.

60. Ibid., 273.

61. Ibid., 278.

62. Ibid., 297-99.

63. Ibid., 311.

64. GNTRG 353, 20 May 1942, Subject: Combined Infantry-Tank Unit Training, Record Group 337, National Archives.

65. For an examination of the problems in combined arms training in the First U.S. Army in Normandy and the solutions to them, see Michael D. Doubler, Busting the Bocage: American Combined Arms Operations in France, 6 June-31 July 1944 (Fort Leavenworth: Combat Studies
Institute, 1988).


67. Ibid., 10-11; HQ, AGF, 2 September 1942, "The Problem of Classification and Assignment Relative to the Activation of an Infantry Division," Entry 24, Box 3, Record Group 337, National Archives.


70. Ibid., 20.

71. Ibid., 19.

72. Ibid., 74.

73. Ibid., 72-74.

74. Ibid., 38-39.

75. Ibid., 77-78.

76. Ibid., 84.


78. HQ, European Theater of Operations, War Department Observers Board, AGF Report No. 1044, 25 June 1945, File 4-3.1044/45, Box 24459, Record Group 407, National Archives, MMRB.


82. HQ, AGF, "Reports on Quality of Overseas Replacements," 29 October 1943, Tab I, 322, Record Group 337, National Archives.

83. WDGCT 320.2, 13 June 1943, Subject: Loss Replacements, Record Group 337, National Archives.

84. GNGCT 320.2/562, 25 June 1943, Subject: Loss Replacements, Record Group 337, National Archives.

85. Memorandum for Deputy Chief of Staff, AGF, 26 January 1945, Subject: Data Regarding Suitability of AGF Replacements, 322, Record Group 337, National Archives.

86. Keast et al., The Procurement and Training of Ground Combat Troops, 226.

87. Ibid., 228.

88. JPS 57/8, 26 April 1943, Troop Bases for all Services for 1944 and Beyond, ABC 370.01 (7-25-42), Record Group 165, National Archives.


90. Ibid., 407.

91. Ibid., 408.

92. Ibid., 411.

93. Ibid., 411-12.

94. Ibid., 426-27.

95. Greenfield, et. al., The Organization of Ground Combat Troops, 159.

96. Matloff and Snell, Strategic Planning for Coalition Warfare, 1941-1942, 99.

98. Using only the nine Army divisions in the Pacific at the end of 1942 in a limited offensive would have freed the 6th, 7th, 31st, 33d, 38th, 77th, 81st, 93d, 96th, and 98th Infantry Divisions, the 1st Cavalry Division, and the 11th Airborne Division for use in Europe. Maurice Matloff, *Strategic Planning for Coalition Warfare, 1943-1944* (Washington: Office of the Chief of Military History, 1959), 396 and 520.

99. On 31 December 1942 the Army had 463,868 soldiers, 9 divisions, and 23 air groups in the Pacific Theaters. By September 1944 these numbers had grown to 1,314,931 soldiers, 21 divisions, and 57 air groups. The personnel cost of stationing 12 more divisions and 34 more air groups in the Pacific between these two dates was thus over 800,000 men, nearly 30 percent of the number stationed in Europe by the end of September 1944. Ibid., 392-93, 519-20.
CHAPTER III

HONING THE EDGE: PRE-COMBAT TRAINING

In World War I the United States shipped hastily organized divisions overseas to France, where the American Expeditionary Forces trained them for their role in trench warfare. The Army of the United States enjoyed no such luxury in World War II. The only areas available outside the Mediterranean for staging American divisions overseas before D-Day were Great Britain, Northern Ireland, and Iceland. The United States sent forces to all three locations in 1942, but the limited space on these islands made large-scale training impossible. The only option left to Army Ground Forces was to train American divisions to combat standards in North America prior to their shipment overseas.

The United States was also largely devoid of large-scale training areas prior to World War II. Between 1940 and 1945, the Army conducted exercises in five massive maneuver areas located in Louisiana, the Carolinas, Tennessee, Arizona-California, and Oregon (Figure 1). Individual divisions, however, needed more permanent locations in which to organize and train. World War II
FIGURE 1
ARMS GROUND FORCES MANEUVER AREAS

Source: Army Ground Forces, Statistical Data
caused the Army to expand existing installations or construct new facilities across the United States. Some divisions had to live in tents for the first few months of their existence as they struggled to organize and build training facilities simultaneously.³

By nearly a three-to-one ratio, a sample of surviving graduates of the United States Military Academy who fought in World War II stated that Regular Army divisions which fought in Europe (the 1st, 2d, 3d, 4th, 5th, 8th, and 9th Infantry Divisions) entered combat at a higher state of readiness than other divisions.⁴ There are many reasons why this might be so. Since these divisions were either already in service in 1940 or activated that year, the War Department had a large pool of experienced Regular Army personnel from which it could select commanders and cadre. General George C. Marshall assigned some of the best general officers in the Army to command these units. In addition, the divisions received experienced junior officers and noncommissioned officers from the interwar Army and some of the best graduates from the Reserve Officers' Training Corps. Although subsequent War Department levies on these divisions for cadres to form new units hurt readiness, lengthy pre-war training and early combat experience were key factors in making regular divisions more effective in combat early in the war.
The history of the 1st and 9th Infantry Divisions prior to their participation in Operation TORCH illustrates the advantages of the Regular Army divisions early in the war. The 1st Infantry Division, the "Big Red One," is the oldest infantry division in the United States Army. The War Department activated the division on 24 May 1917 and never deactivated it after World War I. The 1st Division participated in all major American offensive operations of the Great War, to include the Aisne-Marne, St. Mihiel, and the Meuse-Argonne campaigns. This proud battle tradition resulted in a great deal of pride and a certain amount of hubris among the soldiers of the Big Red One in World War II.

The 1st Infantry Division was one of the first divisions converted to the triangular configuration, which eliminated infantry brigade headquarters and reduced the number of infantry regiments in the division from four to three. The reduction of support services created an organization designed to operate as a component of a larger organization. In combat, the division would receive additional combat, combat support, and combat service support assets from corps or army pools. The War Department held maneuvers in Louisiana in May 1940, partly as a means of testing the new triangular structure of its divisions. The War Department recognized the potential significance of the triangular division in combat when it
specifically asked commanders to comment on "the tactical
mobility of the division" and "the capacity of the division
for sustained action." 7

The report of the 1st Infantry Division on the
Louisiana Maneuvers of 1940 attested to the utility of the
triangular division in mobile operations:

Organized into balanced and compact combat
teams, the division is potentially a highly
efficient battle unit. It exemplifies speed,
power, maneuverability. As organized and trained
it is highly mobile and may be adapted to a
variety of tactical situations. Although not
completely motorized, maximum use (in time and
space) of its available motors enhances the
opportunities for success by means of its attacks.
Its armament with the ammunition carried will
enable the division to sustain combat—limited
only by its insufficient available manpower. 8

In a single paragraph the 1st Infantry Division recognized
both the strengths and weaknesses of the triangular infantry
division which would manifest themselves on the battlefields
of France and Germany four years in the future.
Specifically, the division report stated, "The commander who
fails to grasp the great changes caused by the introduction
of the motor and who does not use these motors to the
maximum, is bound to fail." 9 On the other hand, the
division also noted that after subtracting those elements of
the infantry regiments not normally used in battle (cooks,
drivers, headquarters personnel, etc.), the division had
only approximately 6500 men available to fight. The 1st
Infantry Division did not think the number sufficient to
sustain combat operations. 10
The War Department earmarked the 1st Infantry Division along with the 3d Infantry Division for amphibious training early in the mobilization process. As a result, both divisions received excellent and continuous training between 1940 and 1942 as the United States mobilized its ground army for upcoming operations.

The first major amphibious exercise the 1st Infantry Division participated in began in December 1940 with preliminary training near Edgewood Arsenal, Maryland. The division used advance copies of FM 31-5, *Landing Operations on Hostile Shores*, to train its combat teams. The division task force sailed on 17 January 1941 and reached Culebra, Puerto Rico, nine days later. There the division conducted joint landing exercises in conjunction with the Navy and three Marine combat teams. The division continued its amphibious training in the summer of 1941 at New River, North Carolina. The maneuvers were of great benefit in teaching the 1st Infantry Division the basics of amphibious operations, especially the doctrine developed by the Marine Corps during the 1920s and 1930s.

The next major training exercise for the 1st Infantry Division was the Carolina Maneuvers of October-November 1941. The division learned many useful lessons in these maneuvers, but also noted problems with infantry-tank cooperation, air-ground liaison, poor radio equipment, vehicle maintenance, inadequate cold weather uniforms, and
the capabilities of anti-tank guns. Interestingly, the 1st Infantry Division concluded that tank destroyers should have a superior gun and equal mobility and protection to that of the tanks which they would engage. "This leads to the conclusion that the tank attacker should be a specialized type of tank armed with the 75mm or a 105mm gun." The War Department would have done well to heed the advice.

Finally, the division noted that the large-scale training of army-level maneuvers did not improve the capabilities of small units to perform in combat:

All large maneuvers should be immediately followed by training of the small units in the details and technique which are quite often slurred in large maneuvers due to the rapidity with which they move and a constant tendency of all echelons to develop a maneuver technique as opposed to a war technique.

Lieutenant General Lesley J. McNair and General Headquarters (GHQ) intended to remedy the lack of small unit training with a four month remedial training program beginning in December 1941. This program was the first of many that had the effect of consolidating training standards under the supervision of GHQ and its successor, the Army Ground Forces (AGF). Unfortunately, a little more than a week after the conclusion of the Carolina Maneuvers, the United States found itself at war. For most divisions, plans for retraining went by the wayside as the War Department ravaged them for cadres to mobilize new units.
Fortunately for the 1st Infantry Division, the War Department largely spared it from providing cadres in favor of more amphibious training. The War Department was fairly sure that any combat operation conducted in 1942 would begin with an amphibious landing on a hostile shore, and the Army needed one or two units at full strength and efficiency to execute such an operation.

Immediately after the conclusion of the Carolina Maneuvers, the 1st Infantry Division began planning for amphibious training at Cape Henry, Virginia, in January 1942. Colonel Norman D. Cota, the Division G-3, noted in his after-action report that all echelons from company through division showed a much better understanding of amphibious operations compared to the exercises the previous year. The biggest problems the division noted were the failure of the landing craft to deliver the troops to the correct landing beaches and inadequate air and naval gunfire support—deficiencies that the Army and Navy still had not corrected when the division landed on the beaches of Normandy over two years later. The division also emphasized the necessity of employing tanks in the leading waves of the assault, since their firepower and shock action would provide "immeasurable assistance" in securing the beach. Colonel Cota recommended more night training and a joint air-naval-ground rehearsal prior to actual operations.
The 1st Infantry Division rounded out its training prior to combat in Camp Blanding, Florida, and Indiantown Gap, Pennsylvania. Prior to going overseas, however, the division received a new commanding general. Major General Donald Cubbison, who commanded the division from July 1941 to May 1942, was one of the numerous generals in the Army whom Marshall deemed to be too old to command a division in combat. The colorful and combative Major General Terry de la Mesa took command of the Big Red One at Camp Blanding. Thus began a love affair between Allen and the 1st Infantry Division which would cause much controversy in the North African and Sicilian campaigns.

Terry Allen was born on 1 April 1889, the son of a charismatic and successful Regular Army officer, Henry T. Allen. He grew up on various Army posts, largely in the Midwest and Southwest. Allen entered the United States Military Academy in 1907, but failed his second year. He received another chance, but failed again in 1911 and left West Point for Catholic University in Washington, D.C. After earning his degree, Allen took and passed the competitive examination for a commission as a cavalry officer in the Regular Army. He served with the 14th Cavalry on the Mexican border before deploying overseas in 1918. Allen served as an infantry battalion commander in World War I with the 90th Division, which was commanded by his father. He fought in both the St. Mihiel and the Meuse-
Argonne Offensives, where he was wounded twice and earned two citations for bravery. Allen later attributed his emphasis on night operations to his experiences with the 90th Division in the Meuse-Argonne campaign.\textsuperscript{20}

Terry Allen was an excellent polo player, a sport he could cultivate while serving with various cavalry regiments in the Southwest between 1922 and 1940. During this period he also attended the Cavalry and Infantry Schools, the Command and General Staff School, and the Army War College. During the mobilization of the Army in 1940, the War Department promoted Allen from lieutenant colonel to brigadier general. Allen served with the 2d Cavalry Division, the 4th Infantry Division, and the 36th Infantry Division prior to assuming command of the 1st Infantry Division in June 1942. Allen was an exceptional division commander who displayed intensely loyalty to his soldiers, and they returned his confidence in them through their performance in combat. "Never in my life have I seen a man so worshipped as Terry was and is not only by his men in the First but by every war correspondent who has ever come in contact with him," wrote war correspondent Quentin Reynolds.\textsuperscript{21}

When the 1st Infantry Division deployed to Great Britain in August 1942 in preparation for its role in Operation TORCH, the invasion of North Africa, it could proudly claim to be the best-trained and led division in the
Army of the United States. This statement is not meant to
denigrate the other units of the Army, but instead reflects
the advantages the Big Red One enjoyed as a result of its
early designation by the War Department as one of the first
combat divisions intended for overseas action. As a result,
the 1st Infantry Division enjoyed a high percentage of
Regular Army leadership at all levels, low personnel
turnover, and good training as it prepared for combat. This
was not the case with most other divisions—including many
Regular Army divisions—prior to their introduction into
combat. The 9th Infantry Division is a case in point.

The War Department activated the 9th Infantry Division
on 1 August 1940 at Fort Bragg, North Carolina as part of
the expansion of the Regular Army to 375,000 men. The newly
created division received a strong group of cadre who formed
a solid basis upon which to build a quality unit. A total
of 1,881 officers and men arrived from posts in twenty-four
different states, to include many noncommissioned officers
who were technical specialists in various fields. Volunteer recruits followed shortly to flesh out the cadre
for the new division. The cadre's first task was to convert
a pine-covered wilderness into a military camp. The men
lived in a tent city until Christmas, when they moved into
new, wooden barracks. The engineers built numerous roads
and training facilities. Morale was excellent, and units
vied with one another to beautify their areas. The
experienced cadre trained the new recruits on fundamental soldier skills. The division devoted the bulk of each weekday to training, but left time for organized athletics and other recreation activities.23

The division suffered a tragic loss on 20 September 1940 when its commander, Brigadier General Francis W. Honeycutt, died in an airplane crash en route from Fort Bragg to corps headquarters in Atlanta. To replace him, the War Department assigned Major General Jacob L. Devers as the commanding general of the division. Devers was a 1909 graduate of the United States Military Academy at West Point. He had missed combat in World War I and spent the war at Fort Sill, Oklahoma. Between the wars, Devers commanded several field artillery units and had a normal range of staff assignments. He was a distinguished graduate of the Command and General Staff School (1925) and a graduate of the Army War College (1933). Prior to his assignment as the commander of the 9th Infantry Division, Devers had been the Chief of Staff in the Panama Canal Department. Devers would remain with the division for a little less than one year, but he gave the unit strong leadership and a good start in its formative months.

On 16 January 1941 the first group of draftees arrived to bring the division to full strength. Unlike the divisions activated in 1942 and 1943, draftees composed less than half of the 9th Infantry Division.24 The cadre
trained the new inductees in basic and advanced soldier skills. Within a few months the division had assimilated the draftees, and began to grow into a cohesive and capable organization. Training activities included road marches, rifle marksmanship, grenade exercises, calisthenics, close-order drill, bayonet training, and numerous inspections. The division spent the summer of 1941 in extensive field training exercises, to include regimental maneuvers against the 44th Infantry Division near Bowling Green, Virginia. Despite shortages of modern equipment, the division developed tactics and techniques in accordance with the latest tactical doctrine. General Devers left the division on 31 July to assume command of the Armored Force at Fort Knox, Kentucky. Major General Rene E. DeRussey Hoyle, the commander of the division artillery, took command of the division and led it through the Carolina Maneuvers.

The 9th Infantry Division finished its mobilization training by participating in the Carolina Maneuvers, one of the two great General Headquarters (GHQ) maneuvers held in the summer and fall of 1941. The maneuvers began with division versus division and corps versus corps exercises in October and early November, followed by army maneuvers from 16-28 November. The 9th Infantry Division was part of Lieutenant General Hugh A. Drum's First Army, a traditional infantry-heavy force of eight infantry divisions and six
regimental-size antitank groups.28 "These were the days of simulated artillery fire, flour-sack bombs, broomstick guns and beer-can mortar shells," a divisional history pamphlet relates.29 The army-level maneuvers were somewhat anti-climactic for the 9th Infantry Division. Drum kept the division in army reserve during the first phase of the maneuvers.30 In the second phase, the division attacked as part of Major General Lloyd R. Fredendall's II Corps. After two days the advance of the corps to Chesterfield, South Carolina and its link-up with I Corps pinched the division out of the line and Drum again pulled it into army reserve.31 Drum used the division to defend against an armored breakthrough and temporarily motorized it to conduct another attack. The maneuvers did little to improve the state of training or readiness of the average soldier.32 More important was the staff practice gained in the coordination of larger combat units in battle.33

At the conclusion of the Carolina maneuvers, the 9th Infantry Division returned to Fort Bragg. On 3 December 1941 General Hoyle congratulated the division on its performance. "We have fought a good fight," Hoyle stated, "the 9th Infantry Division is ready for anything."34 It would have to be, for four days later the Japanese attacked Pearl Harbor, and the United States was at war. In the frenzied atmosphere, the 9th Infantry Division dispersed units throughout North Carolina to guard power plants, dams,
and bridges. This precautionary measure gives a good indication of the initial confusion of the nation in the wake of the surprise attack on Pearl Harbor.

The 9th Infantry Division was a victim of the dichotomy of the mission of GHQ in early 1942. The division not only had to train for war, but it lost many valuable men to provide cadres for newly activated units. GHQ planned to use the 9th Infantry Division as one of the first assault elements in any expeditionary force operation, so in January 1942 it assigned the division to the Amphibious Force, Atlantic, for amphibious assault training. The division began training in loading and unloading from ships with mockups, rope ladders, and small boats representing transport vessels and landing craft. Until the late spring the division trained on dry ground or on McFayden's Pond on the Fort Bragg reservation. The division also continued routine garrison and field training to maintain its proficiency as a fighting organization. Due to excessive personnel turnover, however, the division found it impossible to sustain its training level of the previous year.

The experience of the 9th Infantry Division was representative of the turmoil that many units (the 1st Infantry Division being a notable exception) suffered in the hectic months of mobilization that followed Pearl Harbor. In January 1942 the War Department ordered the 9th Infantry
Division to prepare and train a cadre for the 82d Infantry Division, which the War Department would soon activate at Camp Claiborne, Louisiana. Unlike some divisions, the 9th Infantry Division took its role as a "parent" unit seriously. "This cadre consisted of some of our most experienced noncommissioned officers and a thorough program of training was prepared for them," recorded one unit historian in 1942. The quality of the 82d Infantry Division, soon to provide the basis for both the 82d and 101st Airborne Divisions, attests to the abilities of the cadre provided by the 9th Infantry Division.

The provision of cadre for the 82d Infantry Division in February 1942 did not end the exodus of trained personnel from the 9th Infantry Division. As soon as the cadre for the 82d Infantry Division had departed, the War Department ordered the 9th Infantry Division to prepare another group of cadre for the 88th Infantry Division, which the War Department planned to activate in the summer at Camp Gruber, Oklahoma. The 9th Infantry Division again sent some of its best personnel to the new division. The fact that Major General John E. Sloan, commander of the 88th Infantry Division, and Brigadier General Stonewall Jackson, the assistant division commander, were friends with many senior officers in the 9th Infantry Division helped to expedite the cadre selection process. The 88th Infantry Division went on to establish a reputation in Italy as one of the
best American infantry divisions in World War II, another indication of the high quality of cadre provided by the 9th Infantry Division in 1942.

The 9th Infantry Division also provided numerous cadre for nondivisional units and replacements to fill units deploying to the Pacific to stem the Japanese advance, and trained a group of cadre for the newly activated 78th Infantry Division. The drain of experienced manpower from the division degraded its overall readiness, even with the increased tempo of training now that the nation was at war. As the division's amphibious training reached a peak during the summer of 1942, there was little the units could do about the personnel turnover except train the new inductees they received in exchange for the experienced personnel they lost. The trade was not fair, but it was necessary if the Army were to expand into the huge force envisioned by the Victory Program of 1941.

In the summer of 1942 the 9th Infantry Division began full-scale amphibious exercises off Solomon's Island in Chesapeake Bay and New River, North Carolina. The amphibious training ended in early September, when the units prepared for deployment overseas. By September the division was at full strength, but the training of the soldiers varied widely. The War Department filled the division with personnel to prepare it for Operation TORCH. The 9th Infantry Division was more fortunate than those divisions
remaining in the United States. The demands of the TORCH forces caused the War Department to strip men and equipment from many divisions left behind.\textsuperscript{38}

The 9th Infantry Division would enter combat with a new commander. On 24 July Brigadier General Manton S. Eddy assumed command of the division.\textsuperscript{39} Eddy had received a direct commission into the Army in 1916, and fought with the 39th Infantry Regiment, then part of the 4th Division, in France during World War I. He served with a machine gun detachment and was wounded, but decided to continue in the service after the war. During the interwar years, Eddy served in various assignments as a ROTC instructor, assistant operations officer in the Hawaiian Department, and spent six years in Fort Leavenworth as both a student and instructor. On 16 March 1942 he had reported to Fort Bragg as the assistant division commander of the 9th Infantry Division. On 9 August the War Department promoted Eddy to major general. Eddy proved to be an outstanding division commander during the war. His leadership was a key factor in the success of the 9th Infantry Division in combat.

Due to personnel turnover, the 9th Infantry Division was less than a fully cohesive and capable force when it embarked for French Morocco in the fall of 1942. Nevertheless, with a solid core of Regular Army cadre, the division would eventually develop into a fine fighting force after suffering through its first, dismal combat experience.
as a division in Tunisia. The experiences of the 1st and 9th Infantry Divisions proved that the Army could build quality units from its small, interwar Army foundation. For the massive effort required to win a war against Germany and Japan, however, the nation would need every combat division at its disposal. In World War II, the National Guard divisions would receive their first substantial test as a component of the Army of the United States.

When President Franklin D. Roosevelt began the induction of the National Guard into federal service on 16 September 1940, its eighteen divisions were poorly trained and woefully understrength. The Selective Service Act, passed by Congress on the same date as the induction of the National Guard into federal service, provided fillers to bring National Guard units along with Regular Army divisions to full strength. Large numbers of untrained personnel, however, were worthless unless the Army could provide the experienced cadre to train them to standard. Unfortunately, although the National Guard provided over 21,000 officers, less than a third of them had completed a course of instruction in a service school, such as the Infantry Officers Course at Ft. Benning, Georgia. Too many National Guard divisions foundered in 1940 and 1941 as a result of poor leadership. Discipline and morale in National Guard units was poor, staff work was weak, and senior National Guard commanders were slow to adapt
themselves to the changing concepts of warfare. Marshall and McNair acted after the Louisiana Maneuvers of 1941 to purge National Guard divisions of the incompetent and unfit.42

To be fair to the senior National Guard leadership, none of the Regular Army division commanders in command in 1940 went on to command divisions in wartime either, although three of them were promoted and commanded at higher echelons. The problem was that the interwar promotion system produced division commanders who were simply too old for combat. Unfortunately for National Guard senior leaders, when General McNair nominated replacements to command divisions, he naturally dipped into the pool of talent with which he and General Marshall were most familiar--the Regular Army officers with whom they had served for three decades. As a result, only in rare instances did National Guard officers rise above the rank of colonel and command of a regiment. By the end of the war, only one National Guard Division--the 37th Infantry Division from Ohio--was commanded by the same person who was in command of the division in 1941 (Major General Robert S. Beightler).43

This failure to promote National Guard officers to command of divisions was the result of extensive discussions between Marshall and Gen. McNair. On 7 October 1941, McNair wrote a memorandum to Marshall in which he gave his
assessment of National Guard division commanders:

26th - Eckfeldt, Mass. - 50 - live but green; may learn; one of the few promising ones.
27th - Haskell - 63 - should go out for more than age.
28th - Martin, Pa. - 62 - no question but that he should go.
29th - Reckord, Md - 62 - good administrator but should go.
30th - Russell, Ga - 52 - pleasing; leader of a sort; but not a military comdr. Should go sooner or later.
31st - Persons, Ala - 53 - comds effectively; question is whether he has sufficient military background; one of the most promising ones.
32d - Fish, Wis. - 62 - fine man; experienced in Nat. Gd., but believed lacking in military knowledge; should go sooner or later, preferably sooner.
33d - Lawton, Ill. - 57 - dubious; performance thus far shows force, but not too well directed; military knowledge too limited.
37th - Beightler, Ohio. 49. One of the best Nat. Gd. comdrs if he stays with the job.
41st. White, G. A., Ore. 61. Strong comdr, but military knowledge none too full. However, one of the best.
44th. Powell, N.J. 48. Incompetent; Fredendall said would be reclassified.
45th. Key, Okla. 52. Forceful; impressive; and that's about all. Dubious for the long pull.44

McNair followed this memorandum with another on 24 October 1941 in which he stated:

I am unalterably opposed to promoting any NG brig gen now on the horizon to maj gen and assigning him to comd a NG div..."token" promotions by way of appeasement will harm rather than improve the situation...The situation today, as I see it, is not the same as in the World War, when div had merely to "go down the alley." Today the tempo of all operations is speeded tremendously, but the difficulty is that the upper story of our comdrs is not speeded correspondingly.45

Did McNair have a bias against senior National Guard officers? Undoubtedly. Was it justified? Given the lack
of training in the National Guard during the interwar years and therefore the lack of experience of National Guard officers, probably. General Marshall summed up the feelings of most Regular Army officers when he wrote to Under Secretary of War Robert P. Patterson, "The RA units are not bothered by poor morale because the officers have attained professional knowledge either at schools or through practical exp. NG officers have not had these opportunities, and the morale of their units reflects the deficiency."  

General Beightler may have survived because he was not afraid to remove incompetent officers of his own division without prodding from above. Many National Guard divisions, however, suffered from a severe case of the "good old boy" syndrome. Colonel(Ret.) Robert C. Works, who as a major served as operations officer of the West Virginia Maneuver Area and was able to evaluate six reserve and National Guard divisions during training, relates an experience in which a National Guard regimental commander asked him to rate the officers under his command. Major Works thought that most of them were good, with the conspicuous exception of the regimental adjutant, a captain. When Major Works gave his evaluation, the regimental commander stated that he knew of the problem, but could not relieve the adjutant since the captain's father owned the only bank in the regimental commander's home town. "This
nepotism was typical of the 4 or 5 NG regiments I observed in this tough training area," Colonel Works states.48

In the midst of the chaos of mobilization, most National Guard divisions slowly improved their capabilities. Many of these divisions, to include the 29th and 30th Infantry Divisions, would go on to earn excellent reputations for their performance in combat in 1944 and 1945.49 How did the Army transform them into effective combat units?

The War Department inducted the 29th Infantry Division, nicknamed the "Blue and Gray" division because its component units came from Virginia, Maryland, and Pennsylvania, into federal service on 3 February 1941 at Fort Meade, Maryland. The interwar period had not been kind to the division. Like other National Guard divisions, the component units of the Blue and Gray division "functioned as best they could with civilian volunteers handicapped by a public imbued with a disarmament psychology and apathetic to any form of military endeavor."50 The division trained as best it could during limited weekend drills and two-week summer training camps, but these were insufficient preparation for combat.51 The order bringing the division into federal service set off a "frantic scramble and hasty and makeshift preparation" as civilian-soldiers "who had dabbled in the military life of their communities" now faced the ultimate reason for their division's existence.52
To make up the shortfall in commissioned officers, the division commander, Major General Milton A. Reckord, established a ten day officer candidate school in Baltimore in January 1941. The men who went through this course received their commissions in the Army of the United States on 3 February 1941, but one wonders how prepared they were to take up their responsibilities after such a short training period. In the 29th Infantry Division, however, seasoned soldiers were a scarce commodity.

The division faced two major personnel tasks simultaneously. First, it had to weed out the incompetent and physically unfit officers and men in its ranks. Second, it had to fill its ranks with replacements brought into service through the Selective Service Act of 1940 and train the new men in the fundamentals of soldiering. The draftees began to arrive at Fort Meade in April. The purge would take longer.

Throughout the spring and summer of 1941, the 29th Infantry Division conducted basic and unit training at Fort Meade. Meanwhile, the division attempted to cope with a basic problem of the National Guard system. The draftees and officers who had come into the division after mobilization felt the National Guardsmen kept them from advancing, while the National Guardsmen felt the Regular Army officers at higher levels discriminated against them. The division historian felt that this friction "was ironed
out...through common experience. Most of this was cleared up in the mud and dust of the field. Unfortunately, the division historian was somewhat optimistic in his outlook, for the ill-feelings generated between the "ins" (National Guardsmen) and the "outs" (everyone else) in the division would last until the crucible of combat forged them all into one team.

The 29th Infantry Division moved to Fort A.P. Hill in Virginia for field training in September prior to its participation in the Carolina Maneuvers. The division—especially the higher level commanders and staff officers—benefitted from the training received before and during the maneuvers. At lower levels, the training was of lesser value. One participant recalled:

The maneuvers, at my level, were a huge, uncomfortable, motorized camping trip. The antitank platoon, now equipped with inadequate 50-caliber machine guns, shifted from place to place, ostensibly protecting the 2d Battalion from trucks bearing signs designating them as 'tanks,' which never appeared. The top commanders and staffs that supplied and ordered us about may have received useful training, but I learned nothing I did not already know breathing dust and sleeping on the ground.

Despite the poor training at lower echelons of the command, after the Carolina Maneuvers the division was at a higher state of readiness than it was upon activation. After 7 December 1941, however, the needs of national defense and mobilization would combine to actually lower the readiness of the division.
In the wake of the Japanese attack on Pearl Harbor, the War Department scattered the division from Pennsylvania to North Carolina to guard key installations. A month later, General Reckord took command of the 3d Corps Area, an administrative command. General Marshall wanted younger generals to command American divisions in combat, and Reckord's advanced age (61) marked him for relief. The division's new commander, Major General Leonard T. Gerow, was a Regular Army officer. As a 1911 graduate of the Virginia Military Institute, Gerow was a popular choice among the many Virginians in the division.59

Gerow had served four tours during the interwar period on the War Department General Staff, mostly on the planning staff. His final assignment in the War Department was as Assistant Chief of Staff in the War Plans Division, where he was succeeded by Brigadier General Dwight D. Eisenhower. General Gerow went on to command V Corps during the Normandy invasion and throughout the campaign for France and Germany in 1944 and 1945. He was fifty-three years old when he took command of the 29th Infantry Division and was considered by some officers to be the best infantry tactician in the Army.

In February 1942 the War Department reorganized the division into a triangular configuration. Although the reorganization streamlined the division, the process involved a short-term dislocation while units adjusted to the new configuration. The War Department stripped a total
of 86 officers from the division between April and June to help cadre other units. Finally, the division supplied nearly 1,600 men to officer candidate schools before deploying overseas.

In May 1942 the 29th Infantry Division moved permanently to Fort A.P. Hill, which had better training facilities than Fort Meade. Gerow worked his division hard in training in preparation for the VI Corps maneuvers in the Carolina Maneuver Area. The maneuvers ran from July to August and involved the 4th Motorized Division, the 29th and 36th Infantry Divisions, and the 2d Armored Division. Upon the conclusion of the maneuvers, the War Department ordered the 29th Infantry Division to Camp Blanding, Florida. Before the division left the Carolinas, however, the War Department transferred nearly the entire 2d Battalion, 175th Infantry from the division to the Army War Show for the purpose of touring the United States to stimulate the sale of War Bonds. In the midst of another change-of-station, the division coped yet again with a major reorganization to reconstitute the lost battalion.

The 29th Infantry Division arrived at Camp Blanding on 19 August and the War Department alerted it for overseas service on 6 September. A week later the War Department ordered the division to Camp Kilmer, New Jersey. The order caught the division by surprise, and units scrambled to get men on leave back in time for movement. Despite the
frantic pace of the movement, the division executed the transfer smoothly. At Camp Kilmer, the division received new equipment and supplies, but remained over three thousand men understrength.64

The division embarked from New York harbor in two elements. The first sailed on the Queen Mary on 26 September, the second on the Queen Elizabeth on 5 October. Units conducted the movement from Camp Kilmer to the harbor under cover of darkness. Most of the men were nervous.65 They did not realize they would wait for another year and a half before seeing combat.

The fast passenger liners made the journey to Great Britain in only a week. Their speed allowed them to dispense with the slower convoy procedure which most vessels used. The Queen Mary went a little too fast, in fact; she damaged her bow when she rammed and sank a Royal Navy corvette as she steamed towards an anchorage in the Firth of Clyde, Scotland.66 The soldiers, intent on their games of craps and poker in the lounges, paid little attention.

The 29th Infantry Division finally settled down in Tidworth Barracks in Hampshire, west of London. Here the division found itself on Salisbury Plain, the best military training area in England. General Gerow took advantage of the facilities to train his division hard. On 5 January 1943 the Blue and Gray division was still short over 3,500 enlisted men and faced a period of training
replacements. Training took place seven days a week until late January 1943, when the pace throttled back to six days a week as it became clear that the division would not deploy to North Africa.

Small unit training occupied the division's attention early in 1943. Each platoon underwent a combat proficiency test. Every soldier had to complete a twenty-five mile march. Those who dropped out were given a physical examination; those who failed the physical were transferred from the division. General Gerow went on an inspection of the American II Corps in Tunisia and witnessed a portion of the battle for Hill 609, the famous "Longstop Hill" on the road to Bizerte. Upon his return to England, Gerow transmitted the combat lessons he acquired during his trip "to the officers of the division and the effect on training was pronounced." In late May and early June the 29th Infantry Division moved to Devonshire and Cornwall, where it took over the mission of the British 55th Division to defend the area. Intensive training continued in the murky moors of southwest England. Replacements came in to bring units up to strength. The move also brought the division closer to the Amphibious Assault Training Centers near Barnstaple on the north coast of Devon and at Slapton Sands on the south coast. Here the division could conduct realistic amphibious training prior to the invasion of the Continent. General
Gerow would not remain with the division to oversee its amphibious training. On 17 July the War Department promoted Gerow to command V Corps. The 29th Infantry Division would serve in V Corps under a new commander, Major General Charles H. Gerhardt.

Charles H. Gerhardt was born on 5 June 1895 in Lebanon, Tennessee, the son of an infantry officer who was a graduate of the United States Military Academy. He grew up in military life at Army posts in the United States, Alaska, and the Philippines. He entered the Military Academy in 1913, where he excelled in sports and lettered in baseball, basketball, and football, despite his slight build. Gerhardt's class was graduated early on 16 April 1917 due to the outbreak of war. Gerhardt graduated 50th out of a class of 139 and was commissioned in the cavalry.

Lieutenant Gerhardt served with the 3d Cavalry in Texas before deploying overseas to France. He operated a remount station and served as aide to Major General W. M. Wright, commander of a training group in the Vosges Mountains and later commanding general of the 89th Division. Gerhardt served with the occupation forces in Germany until 1919. After a brief tour with the 14th Cavalry in Texas and Iowa, he attended the Cavalry School at Fort Riley in 1922, stayed on a second year to attend the equitation course, and then taught horsemanship at Fort Leavenworth from 1923 to 1925. Between 1926 and 1931 Gerhardt served as a tactical officer
at the Military Academy. He attended the Command and General Staff School between 1931 and 1933.

After a brief tour with the 1st Cavalry Division in Fort Bliss, Gerhardt went overseas where he served as G-1 of the Philippine Department. This was a huge break for Gerhardt and his career, for he received the attention of some future superstars. Gerhardt's commander was General Douglas MacArthur, Major Dwight Eisenhower was the Chief of Staff, and Major J. Lawton Collins was the G-3. Upon returning to the United States, Gerhardt served with the 11th Cavalry at the Presidio of Monterrey between 1937 and 1940 and then on the General Headquarters staff in 1940 and 1941 under General McNair, where Gerhardt earned his first star. Gerhardt commanded the 2d Brigade, 1st Cavalry Division in the Louisiana maneuvers of 1941. He performed well enough that in May 1942 General Marshall gave him command of the 91st Infantry Division, then stationed at Camp White in Bedford, Oregon. Gerhardt activated and trained the division until it passed its Army Ground Forces tests. Marshall then pulled Gerhardt out of the division and sent him to England to take over the 29th Infantry Division.

General Gerhardt liked what he saw when he arrived in England. "The special staff was especially strong and the infantry regiments, particularly the 116th, were in good shape, and the artillery under [Brigadier] General [William
H. J. Sands was superior," he would write later. The command team got even stronger in mid-September 1943 when Brigadier General Norman D. Cota, the combat-experienced chief-of-staff of the 1st Infantry Division, replaced Brigadier General George M. Alexander as the Assistant Division Commander. Cota liked working with troops and shied away from spending long hours in division headquarters. Gerhardt immediately put him to work running battalion training exercises similar to AGF tests.

General Gerhardt earned the admiration and respect of many officers and men in the 29th Infantry Division, but he had an abrasive side to his personality that probably prevented him from being loved the way the 1st Infantry Division loved Terry Allen. One battalion commander who served in the 29th Infantry Division later recorded his impressions of Gerhardt:

A gutty, pushy, arrogant little bastard, admired and respected by many...hated by probably a greater number. He knew his stuff, was aggressive, and took care of the men he knew to be loyal to him...He was also impatient of inability or slowness...My net impression of Charlie is that he was a very fine, egocentric little bastard with a Napoleonic complex, and that if he had had a bit more judgment he would have been a great leader.

Another officer had this impression of Gerhardt:

Physically and by temperament, he conformed to General Philip Sheridan's specifications for a cavalryman, which he had been before the war: short, wiry, daring, and quick. Everything about him was explosive: speech, movements, temper. He
dominated the division by knowing exactly what he wanted done, discarding those who failed to produce it, and rewarding those who did. Gerhardt proved to be a capable division commander in combat. In the near term, however, he had cause for impatience with some of his subordinates, for despite Gerow's best efforts, the Blue and Gray Division was still not a cohesive fighting team when Gerhardt took command.

Contrary to the statement of the division historian that the infighting between the National Guardsmen and the rest of the division ended in training, much animosity still existed in the fall of 1943. The War Department devised the National Guard system based on the idea that men from the same area would function as a cohesive team in combat. During World War II, however, the normal functioning of the mobilization and replacement system of the Army of the United States caused all National Guard divisions to be filled mostly with personnel outside the original units. The National Guardsmen resented the newcomers, especially Regular Army officers who took over coveted positions of leadership and command.

On the other hand, newcomers to the division often felt shunned by the National Guard clique. One officer from the 3d Battalion, 115th Infantry Regiment penned some confidential notes on the state of morale in the division at the time. The officer based his conclusions on observations of his own regiment and from talks with
officers and men throughout the division. "The 'home town boy' still gets the breaks," the officer stated. "The favoritism is a morale-lowering factor. Many competent and patriotic officers and men have been thwarted, frustrated, harried, [and] persecuted at every turn when they have tried to remedy the situation." National Guard officers also sometimes had trouble instilling discipline in their units, since after the war they had to go back and live with the people whom they would punish.

When Gerhardt took command, the officer noted a marked change in morale for the better. General Gerhardt encouraged the rise of competent officers and noncommissioned officers, regardless of their source of commission or regional affiliation. "Everyone gained a very favorable opinion of Gerhardt when he first took over," the officer wrote. "In everyone's opinion he's a 'soldier's soldier'...He's been a tonic for most of the men in the Division." Nevertheless, the officer still felt the problem of morale was "critical." The problem stemmed from the company and battalion commanders, most of them National Guardsmen, who the officer felt were "fundamentally unqualified for their jobs." Finally, the officer complained about inequitable punishment given to draftees and reserve officers compared to that given to National Guardsmen for real or imagined offenses.
The result of the National Guard system in the 29th Infantry Division was a lack of initiative at lower levels:

Restricted, parochial, small town outlooks on the part of these commanders has also resulted in many officers being unwilling to attempt to better the type of training received by the men because they knew their COs would not sanction anything but the old, tried-and-true routine... Many officers—in fact, this has happened on many occasions in every company—have been practically shut out of the running of their companies, because company commanders have preferred to take their old-line NG NCOs into their confidence while leaving out their junior officers.  

The leadership problems of the division adversely affected the preparation of the division for combat. The officers and men who were not National Guardsmen felt discriminated against by those "in the favored graces of state politics." Although Gerhardt instituted changes for the better, much still remained to be done "to eliminate the remaining jealousy and favoritism." Despite its problems, however, the officer felt the division would give a good account of itself in combat, for the competent officers and enlisted men would "not be hindered by mistakes or stupidities when the chips are down."  

General Gerhardt had the best tonic for the situation—hard training. He was ruthless on his subordinate officers and demanded a high state of discipline and competence from his soldiers.  

Aside from the infantry battalion training exercises and tests, each infantry regiment underwent intensive amphibious training at the Assault Training Center on the north coast of Devon in November 1943. Here the
Army established the basic techniques it would use in the upcoming cross-Channel invasion.

In 1944 training intensified as the invasion drew nearer. The 175th Regimental Combat Team (RCT) participated in Exercise DUCK from 29 December 1943 to 4 January 1944 at Slapton Sands. The results of Exercise DUCK were not good. Seasickness in some units reached 50 percent, the assault battalions showed a lack of initiative, aggressiveness, and teamwork on the beach, and combined arms teamwork was poor. Wave after wave piled up on the beach and units advanced only after much confusion. Officers and noncommissioned officers exhibited a lack of leadership a basic knowledge of tactics. The after-action report concluded, "Had this been an actual operation, it is extremely doubtful if many men would have left the beach alive." General Gerow, the V Corps commander, summed up his thoughts on the exercise as follows:

After watching this exercise and similar ones at the A.T.C. [Assault Training Center], I am convinced that a successful daylight landing on a well-defended beach is dependent on such a thorough saturation of the beach area by bombing...that wire, mines and gun emplacements are largely demolished and the defenders' morale shaken...Deliberate removal of wire, mines and other obstacles on open beaches cannot be done by foot troops in the face of heavy aimed fire.

Unfortunately, none of the favorable conditions Gerow described would prevail on OMAHA Beach on 6 June 1944. In the end, the skill and bravery of the troops mattered as much as the massive firepower assembled behind them in the
English Channel. Gerow did get one thing right, however—the need for more practice in landing operations.86

Perhaps because of the poor performance of the 175th RCT during Exercise DUCK, General Gerhardt subsequently designated the 116th RCT as the lead assault element of the division for Operation OVERLORD. The 116th RCT participated in three major amphibious training exercises: DUCK 2 (7-15 February), FOX (9-12 March), and FABIUS I (2-5 May), the latter two in conjunction with the 1st Infantry Division. DUCK 2 went much more smoothly than DUCK. The chief umpire of DUCK 2 noted, "The 116th Infantry and attached and supporting units did a fine job. The landing, the assault of the beach defenses, and the attack inland to the division beachhead line was aggressive. The team work between the infantry and supporting arms deserved commendation."87 However, the soldiers still displayed characteristics of units unseasoned by combat: bunching up, improper use of cover and concealment, men standing upright in the face of enemy fire, and poor flank security.88

Alarming, the Ninth Tactical Air Force participated in neither DUCK nor DUCK 2, so the division was not able to test its air-ground coordination system. Furthermore, naval gunfire did not destroy the pill boxes and gun positions on the beach prior to the landing. The after-action report attributed the problem not to poor accuracy, but to the low volume of fire used.89 The 29th Infantry Division thus
missed a major lesson in the preparation of beaches for amphibious invasion: the need for highly accurate fire to destroy point targets.

Exercises FOX and FABIUS I were dress rehearsals for the invasion of OMAHA beach, with both the 116th RCT from the 29th Infantry Division and the 16th RCT from the 1st Infantry Division taking part. V Corps received both naval and air support for the exercise, to include the use of rocket-firing landing craft [LCT(R)s], naval gunfire support, and air missions from B-26 bombers and P-47 fighter-bombers. Even so, air support was still limited, as one can see from the comments of the Ninth Air Support Command spokesman at the after-action review:

I would like to admit that our extent of participation in amphibious exercises of this type is rather limited. We participated in Exercises "DUCK" and "FOX", and were conspicuous by our absence. The only people actually knowing and seeing us were the SOS [Services of Supply], when we hit their chow line, and the Navy, when we ate their white bread.

The result of the lack of air-ground training in Exercise FOX was the inability of combat forces to receive on-call close air support when they needed it badly on the beach. D-Day would be no different.

One of the problems that continued to haunt the ground forces in amphibious training was landing on the wrong beaches. The commander of the 6th Engineer Special Brigade in FOX stated, "I think we can never get just at the point where we are sure we will land on the right beaches, but we
can get just as close as possible. In the event we do land on the wrong one, we will discover the error right away. The commander declined to speculate what would happen once the error was discovered. The commander of the 116th Infantry Regiment, Colonel Charles Canham, noted:

> In my opinion, there is too much landing on wrong beaches. The last assault company landing on Baker Red was taken approximately 1200-1500 yards south of their beach. Other units were landed in the 16th Infantry area. It seemed to be the rule to get them on the wrong beach...If you can't get in on the right beach in daylight, God knows, they might land you in Russia in the real thing.

Little did the commanders realize how close Exercise FOX would come to the "real thing" on 6 June 1944.

The 29th Infantry Division was probably as well-trained as General Gerhardt and the Army could make it when it embarked for the invasion of the Continent. The soldiers were in good physical condition and confident from the long period of intensive training they had undergone. One officer noted the condition of his battalion as it moved to its marshalling area:

> I was impressed that the battalion was at its peak, as ready as an outfit could be...I was not aware of it, but we were never to look exactly that way again. Battle turned sleekness to a wary, worn look; after D-day, the companies became a kaleidoscope of changing faces.

The division lacked one major ingredient in shaping an effective unit: combat experience. Almost none of the officers and men in the division had been under enemy fire before D-Day. The men of the Blue and Gray division would
receive that experience in spades in the Normandy beachhead.

The experiences of other National Guard divisions at times mirrored those of the 29th Infantry Division and sometimes diverged considerably. The 30th Infantry Division, initially composed of National Guard troops from the Carolinas, Georgia, and Tennessee, entered federal service earlier and combat later than the 29th Infantry Division. The division earned a reputation for dependable performance in combat. European Theater of Operations historian S.L.A. Marshall rated it as the best division in the ETO.\textsuperscript{95} What made the division one of the best?

The War Department activated the 30th Infantry Division, "Old Hickory," on 16 September 1940 over the protests of the War Plans Division. General William K. Harrison, Jr., who was in the War Plans Division at the time and later served as the Assistant Division Commander for the 30th Infantry Division, states:

It [the 30th Infantry Division] was a guard outfit from the Carolinas, Tennessee, and Georgia, and when they put it in federal service in 1940, we protested in War Plans because all the inspection reports showed it was pretty near the lousiest in the country. The people were okay, but you know, they had these political commanders. I think they had a guy named Russell [Major General Henry D. Russell commanded the division from 31 December 1940 to April 1942] who was the commander of it; he may have been a very estimable gentleman and a lawyer and all that, but he wasn't a soldier. Anyway, it took not quite two years to get rid of him.\textsuperscript{96}

Anyway, it took not quite two years to get rid of him.\textsuperscript{96}

Infantry Division received replacements through Selective
Service and established a divisional replacement training center to put them through thirteen weeks of basic training.\textsuperscript{97}

In the June 1941 the division participated in Second Army (Lieutenant General Ben Lear, commanding) maneuvers in the Tennessee Maneuver Area along with the 5th and 27th Infantry Divisions and the 2d Armored Division. The maneuvers allowed Army leaders to continue working out the problem of integrating armored divisions into the Army's training. With Major General George S. Patton, Jr. in command of the 2d Armored Division at the time, the armor performed very well in a mobile environment, as one might suspect. Like the other corps and army-level maneuvers held in the United States during World War II, however, senior commanders benefitted most from the training and enlisted men the least.\textsuperscript{98} General Lear noticed problems at the command level:

\begin{quote}
I am seriously concerned over the problem of command. It should be much better at this stage of training and experience...I regret to say that our chain of command is weak--weak to the extent that if this condition is allowed to continue, the chain, at its weak links, will break whenever an emergency imposes a heavy load.\textsuperscript{99}
\end{quote}

Lear's comment echoes the statement by Harrison on the young leaders in the 30th Infantry Division: "Those were fine young men, many of them good leaders naturally, but they didn't know anything. And this is what a lot of people forget; those are good guys, but you must train them."\textsuperscript{100}
Training was not exactly the strong suit of some units in the Army in 1941. Letters from draftees to their congressman complained of wasted training time, poorly planned exercises, inadequately explained maneuvers, lack of confidence in officers, illiterate and unintelligent noncommissioned officers, and the lack of opportunity to progress. Although some of the letters undoubtedly reflected personal dissatisfaction with the service or a particular unit or leader, others contained some truths about the general condition of the Army at the time. The leadership challenge posed to division commanders was to improve the training and leadership of their organizations. The 30th Infantry Division underwent good training in the Carolina Maneuvers of October and November 1941, but could not correct observed deficiencies prior to the outbreak of war.

By this time, the 30th Infantry Division was clearly in trouble. Training in the division was poorly organized and haphazardly conducted. Ten out of twelve of the division's field artillery battalions failed firing tests. The commander of the I Corps, Major General C. F. Thompson, wrote a long memorandum to General Russell in which he catalogued in excruciating detail the failures of the 30th Infantry Division to progress with its training. The primary cause of the failure, according to the memorandum, was the unwillingness of the division commander to relieve
incompetent subordinates from their positions of leadership. Russell did not relieve a single senior officer from his division in its first year of active federal service. Upon the retention of the National Guard in federal service beyond the one year initially announced, he "expressed an opinion that operation of [age-in-grade] policy would correct most of the deficiencies in leadership of the 30th Division without recourse to measures which would create ill will without certainty of accomplishment." In other words, Russell did not want to antagonize officers from the National Guard with whom he had served during the interwar period. His failure to eliminate officers unfit for combat duty led to his relief early in 1942.

As was the case with the 29th Infantry Division, the declaration of war a week after the Carolina Maneuvers dealt a blow to the readiness of the 30th Infantry Division as it reconfigured to a triangular structure and gave up cadres and trained replacements to form the 77th Infantry Division, among other units. The division lost men to officer candidate schools. By the fall of 1942, the division artillery, engineer battalion, and reconnaissance troop had less than 50 percent of their authorized strength. Even worse, the division lost the 118th Infantry Regiment and the 115th Field Artillery Battalion in the summer of 1942 to foreign service. To replace the lost regiment, the division used cadre drawn from the 117th and 120th Infantry Regiments.
to activate the 119th Infantry Regiment on 7 September 1942. The division then stripped soldiers from the 120th Infantry Regiment to fill the 117th Infantry Regiment, which the War Department detailed to Fort Benning for four months to act as school troops. The 119th and 120th Infantry Regiments were little more than cadres after these moves.103

By this time, the National Guard character of the 30th Infantry Division was seriously diminished, and it more closely resembled a newly created organized reserve (draftee) division. The division moved to Camp Blanding, Florida in October, where it received over 10,000 replacements. On 7 December 1942, one year after Pearl Harbor, the 30th Infantry Division began mobilization training from scratch.104

Meanwhile, the division went through several changes of command. Major General William H. Simpson, the future commander of the Ninth U.S. Army, took command in May 1942, but he left the division in July for higher level assignments. The division finally received a permanent commander on 11 September 1942 when Major General Leland S. Hobbs took command of the division.

Leland S. Hobbs was born in Gloucester, Massachusetts, on 24 February 1892.105 He was graduated from the United States Military Academy in 1915, ranking 68th out of 168 in his class. A fine athlete, Cadet Hobbs played football, baseball, basketball, and ran track. Lieutenant Hobbs
joined the infantry and served with the 12th Infantry in Arizona prior to World War I. He served with the 63d Infantry Regiment in France during the war. During the interwar years, Hobbs served as a tactical officer at the Military Academy (1920-1924), commanded the 3d Battalion, 27th Infantry in Hawaii (1924-1927), served in the Office of the Chief of Infantry in Washington (1928-1932), and was the G-4 of the IV Corps area and Chief of Staff of the Third Army in Atlanta (1935-1939). He attended the Infantry Advanced Course in 1927-1928, the Command and General Staff School from 1932-1934, the Army War College in 1934-1935, and the Naval War College in 1939-1940. After several short assignments, the War Department assigned Hobbs as Assistant Division Commander of the 80th Infantry Division in May 1942. After only four months in that position, Hobbs received his second star and command of the 30th Infantry Division.

General Hobbs chose Brigadier General William K. Harrison, Jr. to be his assistant division commander. Harrison had graduated from the United States Military Academy in April 1917 and was a cavalry officer. He had a normal range of assignments and schools in the interwar period and had served on the War Department General Staff from 1939 to 1942. Even though the assignment worked to the best interests of the division, the respect between the two general officers was anything but mutual. Harrison later
When he [Hobbs] said he had asked for me and I was coming to his outfit, oh, I could have wept. I just didn't like to serve with a guy that I didn't really respect as a soldier. He might have been good at something else. His idea of running a war was to do it by telephone. Well, you can't push a telephone line, you know what I mean? You can't push a string. 

Nevertheless, Hobbs put his new ADC to work improving the division's training. Harrison began by training the general staff of the division and the regimental commanders in map maneuvers and command post exercises, then began improving the quality of lower level units.

The 30th Infantry Division slowly emerged as a trained division, and it made this transformation without large numbers of Regular Army leaders. "We never had more than 31 Regular officers in the division, but they were all in key spots and as soon as I found one that couldn't hack it, we got rid of him," Harrison later recalled. At the same time, he forced the junior National Guard and reserve officers to develop a sense of responsibility for their units. The division was also fortunate to contain some quality senior National Guard leadership. The commander of the division artillery, Brigadier General Raymond McLain, was the most outstanding senior National Guard officer in the ETO. McClain would later assume command of the 90th Infantry Division late in the Normandy campaign and ended the war as commander of the XIX Corps.
The division moved to Camp Forrest, Tennessee in May 1943, where it underwent AGF battalion field exercise tests. Eight out of nine infantry battalions passed the tests; the one unsatisfactory battalion (1st Battalion, 117th Infantry Regiment) subsequently passed after a period of retraining. The division then continued unit and combined arms training until the beginning of army-level maneuvers. In September and October the division participated in Second Army maneuvers in the Tennessee Maneuver Area along with the 94th and 98th Infantry Divisions and the 12th Armored Division. General Harrison recalled, "I was told after the war, by a fellow who had been in McNair's headquarters that the 30th Division was reported by Ben Lear's headquarters as the best division they ever had in the maneuvers--but I think it was because of the training." At the conclusion of maneuvers in early November, the 30th Infantry Division moved to Camp Atterbury, Indiana, where it put the finishing touches on its training and prepared for overseas movement. On 22 January 1944 the War Department ordered the division to move to a staging area at Camp Myles Standish, Massachusetts. The division moved to the port of Boston on 11 February and sailed for Great Britain the next day on board the John Ericsson, Brazil, and Argentina. The three ships joined a convoy that arrived in Great Britain ten days later, and the division moved by rail
to its final destination, Chichester Barracks on the south coast of England.\textsuperscript{112}

How well trained was the 30th Infantry Division for combat? Extremely well, if one judges by the results the division achieved. The early training in 1940 and 1941 probably was not much of a factor in preparing the division for combat, since the War Department stripped the division so heavily in 1942 and changed much of the senior leadership. When the division entered combat, one could hardly term it a "National Guard" division, as seen from the following statistics (taken in June 1944) from the 117th Infantry Regiment:\textsuperscript{113}

\begin{itemize}
  \item regiment composed of soldiers representing every state
  \item most officers by state: New York—18 Tennessee—15
  \item Ohio—12
  \item distribution by geographical area: South—51 percent
  \item North—36 percent
  \item West —11 percent
\end{itemize}

After 7 December 1942, the War Department pretty much left the "new" 30th Infantry Division alone to train and develop as a team. Good leadership, along with this long period of undisturbed training, allowed the division to progress rapidly and become a quality unit. Training in England, limited to small combat team problems, some live fire, physical training, and whatever units could accomplish in their garrisons, merely maintained the level of training the division had attained after the 1943 Tennessee maneuvers. When the 30th Infantry Division embarked from Southampton beginning on 9 June 1944 and headed towards OMAHA Beach—
nearly four years after activation into federal service—"Old Hickory" was finally ready for war.

The Regular Army and National Guard alone would not give the United States the number of divisions it would need to fight another world war. When the United States entered World War II in December 1941, the Army of the United States consisted of 29 infantry divisions, 5 armored divisions, and 2 cavalry divisions. Clearly, this total would not be enough to defeat the forces of the Axis powers on battlefields across the globe. To win the war, the United States would have to generate massive amounts of additional combat power. The Victory Plan of 1941, written by Major Albert C. Wedemeyer of the War Plans Division, envisioned a total of 215 maneuver divisions in the Army of the United States. Although the Army never remotely approached this number of divisions, it did nearly triple the number of divisions in its force structure by the end of the war. The only way to expand this rapidly was to cause major dislocation to existing units by pulling cadres and trained personnel from them to activate new divisions.

These new divisions of the Army of the United States activated after the outbreak of war would provide the bulk of the combat power necessary to achieve victory over the Axis armies on the battlefields of Europe, Africa, and Asia. If the Army could not prepare these new divisions for combat prior to deployment overseas, they would have great
difficulty in combat with more experienced enemy forces. How well did the Army prepare the newly mobilized divisions of the Army of the United States for the ultimate test of battle?

An examination of three "draftee" divisions--the 90th, 104th, and 106th Infantry Divisions--provides some insight into the varied quality of pre-combat training in the Army of the United States between 1942 and 1944.

The 90th Division had a proud history in World War I. After the war, it returned to its home in Texas and reverted to little more than a cadre of reserve officers and soldiers. The division's patch had a T-0 insignia on it, denoting its origins in Texas and Oklahoma. Later in World War II, after massive replacements had diluted the original southwestern background of the personnel, soldiers in the division would claim the T-0 stood for "Tough 'Ombres." Indeed, the 90th Infantry Division emerged from the war with an excellent combat record which justified the soldiers' claims. The success of the T-0 division, however, did not come immediately upon its entry into combat, and the price of glory was high.

The most recent work on the 90th Infantry Division in World War II, written by John Colby, is an excellent unit history written from the perspective of the men who fought in the division during World War II. The author combines personal narratives, letters, diaries, unit
journals, and unit histories with analysis to form his conclusions regarding the combat effectiveness of the 90th Infantry Division. The evaluations of the senior officers in the division are blunt and frank; indeed, Colby blames most of the early problems of the division on inadequate senior leadership, especially at division level.

In Normandy, the 90th Infantry Division fared poorly and Lieutenant General Omar N. Bradley considered breaking the division up and using the men as replacements for other units. Colby writes: "During our initial, confusing days of combat we were hesitant and unaggressive--we were green; after crossing the beaches, we had to regroup and organize for the execution of a complex, demanding campaign; our first two Division commanders and some regimental and battalion commander[s] proved to be weak or futile; and a veteran enemy was strongly deployed through hedgerow terrain." Yet many other divisions in Normandy faced these same obstacles, so why did the 90th Infantry Division have so much more difficulty overcoming them than other units?

Colby does not believe that training was the primary cause of the problems: "Our infantry had bad habits at the squad/platoon level, derived from sloppy conduct of these small units in large-scale maneuvers. More importantly, we were not alerted to or trained for the awful difficulties of hedgerow fighting--an intelligence failure of immense
consequence. However, on balance, it remains difficult to ascribe our poor performance primarily to training inadequacies. Indeed, Colby states that "The Division had been well trained, by the standards of its day." He concludes by blaming the poor performance of the division on its leadership. "Any objective appraisal indicates that our Division's early leadership was critically weak, especially at the two most important command levels in an infantry division--Commanding General of the division and the commanders of the nine infantry battalions."

How fair is this assessment? The leadership of the 90th Infantry Division in Normandy was clearly inadequate, but the leadership failures did not just manifest themselves in combat. The poor leadership also affected the 90th Infantry Division's preparation for combat. The soldiers in the division were no better nor any worse than those in other infantry divisions, but their inadequate training in the United States set them up for failure on the battlefield. In time the 90th Infantry Division, under a new set of leaders, would emerge as a quality division in the battles for France and Germany in 1944-1945. Unfortunately, poor pre-combat training meant that the soldiers of the division had to learn their profession at the sharp end of combat, and as a result they suffered high casualties in their first two months of battle.
The War Department reactivated the 90th Infantry Division on 25 March 1942 at Camp Barkeley, Texas, one of the first three divisions formed after Pearl Harbor. The cadre for the division came mostly from the 6th Infantry Division, but most of the enlisted fillers were originally from Texas and Oklahoma. Major General Henry Terrell, Jr. commanded the 90th Infantry Division from its activation until January 1944. His influence, more than that of the commander who followed him (Brigadier General Jay W. McKelvie), determined the quality of training the division received prior to its deployment overseas and entry into combat.

Terrell, a native Texan, entered military service by competitive examination in 1912 and joined the 22d Infantry at Fort Bliss, Texas. He served in World War I as an officer in the 39th Infantry Regiment and took part in the Second Battle of the Marne, St. Mihiel offensive, and the Meuse-Argonne campaign, where he received the French Croix-de-Guerre for heroism. Terrell commanded the 9th Infantry Regiment at Fort Sam Houston, Texas in 1940. After serving in the personnel division of the War Department General Staff in Washington, Terrell received his first star and served with the 8th Infantry Division at Fort Jackson, South Carolina, until his appointment as commander of the 90th Infantry Division.
The 90th Infantry Division went through the standard seventeen week basic training cycle from April through July 1942. The basic training cycle was not even complete, however, before the War Department ordered the division to give up a cadre of over 1,300 officers and enlisted soldiers to form the 104th Infantry Division. The fact that the 104th Infantry Division performed superbly in combat reflects well on the soldiers the 90th Infantry Division sent to Oregon as cadre for the new division. Like other parent divisions, the 90th Infantry Division suffered short term disruption as a consequence. It could have probably recovered from this disruption during the unit training cycle, which began in August 1942, except for a decision by the War Department to reorganize the division.

The War Department interrupted unit training when it designated the 90th Infantry Division as a "motorized" division on 15 September. For the next several months, division training was in turmoil as the units adjusted to their new roles. General William E. Depuy, who served in the 357th Infantry Regiment during the war, later recalled:

We were motorized by that time, and all the energy and imagination in the division was totally absorbed in how you could get a regiment to mount up in trucks and go down the road and not be lost and get there on time. We spent months just learning how to do that. Whereas, we should have spent months learning how to fight. But the reason for that was that the division commander, the regimental commander and the battalion commanders were able intellectually to cope with a truck movement, but they weren't intellectually able to cope with training for combat because it
was more complex. So, I really didn't think much of the training.124

Furthermore, the leadership of the 90th Infantry Division did not take advantage of lessons learned from North Africa to improve the division's training.125

General Depuy's comments are borne out by the evaluation the division received during AGF tests administered by VIII Corps in December 1942 and January 1943. Nearly every mistake the division made in these tests it repeated in combat in Normandy. A representative sampling of the umpire comments are enlightening:

None of the enlisted men or NCO's of the 359th Infantry questioned knew anything at all about the situation or mission. Some of them didn't even know their individual sector of fire. They didn't know why they were there or what they were doing.126

The Division plan was to jump off with two regiments abreast. The 359th Inf...jumped off in column of companies; with companies in column of platoons; and platoons in column of two's, closed up tight on the road. In this formation, the Battalion advanced...until the head of the column was fired on by two machine guns at a range of about 100 yards. This would have caused great losses.127

90th Division Headquarters failed to supervise the formation of the plans of subordinate units. It permitted lower units to promulgate plans which were tactically unsound, although ample time was available for modification before jump-off.128

Many officers were frequently lax in providing forceful leadership and supervision of personnel.129

The movement of the Blue forces [358th Infantry] ...showed a lack of aggressive action. There was a tendency to remain on the vehicles and
move close to the enemy before dismounting to fight on foot.\textsuperscript{130}

In a deployment on the morning of January 11th, the 2d Bn., 359th Infantry, advanced without knowing the location of other units of their own regiment. As a result, a portion of their troops opened fire on the 3d Bn, 359th Infantry, which was deployed to their front and engaged with the enemy. The 3d Bn was thrown into some confusion...\textsuperscript{131}

The men bunch up too much during the attack and control over companies is lacking. Platoons advance without knowledge of terrain and without proper use of scouts...Men are allowed to advance by fire and movement...the movement being standing, when they should be crawling. (3d Bn., 357th Infantry)\textsuperscript{132}

On the other hand, the umpires praised the ability of the division to conduct road marches and establish assembly areas, just as one might expect from General Depuy's comments on the training emphasis of the division. The umpires also noted the excellent morale of the soldiers of the division and believed they "will make a good showing if properly led and supervised."\textsuperscript{133} Overall, one must agree with Depuy's assessment that "there wasn't much conviction about tactics" in the division.\textsuperscript{134}

After the completion of division tests, the 90th Infantry Division deployed to the Louisiana Maneuver Area to take part in Third Army maneuvers against the 77th Infantry Division. The maneuvers ended in late March and the division returned to Texas, only to have the War Department convert the unit back to a standard infantry division. The division, which had learned how to conduct long, motorized
movements so well, now faced a period of training in the more basic tasks of close combat. The division established courses in attack of fortified areas, village fighting, close combat, and day and night infiltration.\textsuperscript{135}

The next major maneuver the division participated in was better suited to the training of a motorized unit than a standard infantry division. The 90th Infantry Division deployed to the Desert Training Center in Arizona-California in September 1943 and trained there for three months. Maneuvers against the 93d Infantry Division in the desert conditioned the 90th Infantry Division for long, sweeping movements.\textsuperscript{136} Unfortunately, they did little to correct the deficiencies in training at the small unit level or prepare the division for combat in Normandy.

The 90th Infantry Division deployed to Fort Dix, New Jersey, from 26 December 1943 to 8 January 1944. There the division integrated replacements (stripped from the 63d Infantry Division) to bring it to full strength and received new clothing and equipment. On 23 January 1944 Brigadier General Jay W. McKelvie assumed command of the division, and General Terrell left to take command of the XXII Corps at Camp Campbell, Kentucky.\textsuperscript{137} McKelvie took the 90th Infantry Division to Great Britain in late-March and early-April. Quartered in the Midlands near Birmingham, England, the division waited for the next move that would take it into combat.
General McKelvie was a native of South Dakota who had enlisted in the 7th Cavalry in 1913 and had participated in the Punitive Expedition to Mexico in 1916. In 1917 he received a commission and served in the 78th Field Artillery in World War I. He served in various artillery units during the interwar period, attended the Command and General Staff School and the Army War College, and served in the War Plans Division and in the Office of the Chief of Field Artillery. MacKelvie commanded the 85th Division Artillery from May 1942 to September 1943 and the XII Corps Artillery for four months before assuming command of the 90th Infantry Division.\(^{138}\)

General Depuy recalls, "McKelvie's nickname was the 'Oral Null' because to the best of anybody's knowledge, he never said anything during the entire time he commanded the division. He certainly didn't say it to any troops."\(^{139}\)

John Colby is even more damaging in his assessment of McKelvie:

Careful analysis of all available comments from a large number of veterans finds not a single favorable note...Shortfalls included: no apparent knowledge of infantry tactics or battlefield leadership; unwillingness to accept sound advice from his knowledgeable subordinates...was distant, cold, and remote in personality...He rapidly disintegrated within four days of actual combat stress...Indeed a sad picture, but it can be painted in no kinder colors.\(^{140}\)

Simply put, McKelvie lacked the ability to remedy the defects in the division's training. Poorly trained and woefully led at the higher echelons of command, the 90th
Infantry Division was headed for disaster in Normandy.

In contrast to the 90th Infantry Division, few divisions in the Army of the United States were as fortunate as the 104th Infantry Division. Activated on 15 September 1942, the Timberwolves (the division adopted this nickname due to its origins in the Northwest) managed to escape the period of high personnel turbulence that inflicted other divisions in the first half of 1942. The War Department did not deploy the division overseas until August 1944, so the division missed the grueling battles of attrition in Normandy. Finally, the Timberwolves entered combat under the command of Major General Terry de la Mesa Allen, one of the few combat-experienced division commanders in the Army. The combination of a long period of training, good leadership, and entry into combat against a deteriorating German army led to the division's success on the battlefield.

The War Department organized the 104th Infantry Division in July 1921 as a reserve division under the provisions of the National Defense Act of 1920. Known until 1942 as the "Frontier Division," the reservists assigned to the division in the first two decades of its existence comprised little more than a shell. After activation in the fall of 1942, officers and enlisted men arrived from all over the United States to bring the division to full strength. Most of the cadre for the
division came from the 90th Infantry Division, then stationed at Camp Barkeley, Texas. Under the command of Major General Gilbert R. Cook, the 104th Infantry Division underwent its mobilization training at Camp Adair, Oregon, a post it shared with the 96th Infantry Division. Three months of maneuvers in the Oregon maneuver area from August to October 1943 capped the division's mobilization training. During this period the division passed its "D" series maneuvers and took part in IV Corps' maneuvers with the 91st and 96th Infantry Divisions.

General Cook had taken the Timberwolves through the mobilization process, but he would not take the division into combat. General George C. Marshall knew that Major General Terry de la Mesa Allen, who had been relieved of command of the 1st Infantry Division during the Sicilian campaign, was too valuable of a resource to leave out of combat. On 6 October 1943, Cook departed the 104th Infantry Division to take command of the XII Corps area and nine days later Allen assumed command of the Timberwolves. The match proved to be a good one.

Allen put his indelible stamp on the 104th Infantry Division. He turned the Timberwolf Division into an organization that in many ways resembled the Big Red One. In North Africa, Allen wrote "Nothing in hell must stop the First Division" on the operations order of the 1st Infantry Division. He now transferred that motto to the 104th
Infantry Division by proclaiming, "Nothing in hell must stop
the Timberwolves." Allen also wrote and distributed to his
officers and noncommissioned officers pamphlets entitled
"Combat Leadership", "Directive for Offensive Combat," and
"Night Attacks." These publications formed the basis for
his training and leadership of the division. On one
occasion a visiting Inspector General asked Allen who paid
for the publication of these "irregular manuals." When
Allen replied that the division financed them through the
proceeds from two nickel slot machines located in the
Officer's Club, the officer "went off complaining that there
was too much levity in this 'dizzy Timberwolf outfit'."

Allen forced the 104th Infantry Division to become
proficient in night operations. "Night Attacks" was largely
based on a similar pamphlet Allen had used as commander of
the 1st Infantry Division. The pamphlet contained concise
information on the utility of night attacks and the
preparation, direction, and control of forces operating in
darkness. Units were to conduct night attacks on a narrow
front in column formation to facilitate command and control.
The pamphlet concluded, "The skillful use of night attacks
indicates smart, aggressive leadership. Properly executed
night attacks will frequently attain difficult limited
objectives, with comparatively few casualties. The
attacking troops must be highly trained and imbued with a
determination to close with the enemy and destroy him with
the bayonet." In a handwritten note at the end of the pamphlet Allen added, "The 104th Div will learn this dope and do it."

Allen also transferred his experience in combat to his division. In "Directive for Offensive Combat," Allen stressed the need for simplicity in combat operations, the value of night operations, gaining and maintaining contact with the enemy through good reconnaissance, fixing him with field artillery fire and infantry support weapons, and the use of fire and maneuver to destroy enemy forces. Allen knew the value of supporting fire and stressed that "fire superiority is largely gained by the intensive use of close supporting weapons. For attacking rifle units to attempt to secure fire superiority by building up a firing line at long range, results in delay and unnecessary exposure to enemy fire." He also understood German doctrine:

German infantry invariably counter-attacks very promptly. By anticipating and preparing for such counter-attacks, heavy losses may be inflicted on the enemy. American artillery has been particularly effective in this respect. During the Tunisian campaign in North Africa, field artillery units of the First Infantry Division killed more Germans in repelling enemy counter-attacks than in all other types of fire combined.

For an untested division, Allen's ability to inculcate lessons learned in combat was an invaluable asset.

Allen understood the value of unit cohesion. He felt that this cohesion came from two sources: the commander and the pride of the soldiers' in their unit. "American combat
units all have the same potential capabilities," Allen wrote. "Their combat efficiency and esprit will depend on the leadership of their commanders. A 'sorry outfit' means a 'sorry commander'." Allen later thanked the soldiers for adhering to the four primary objectives of their training: discipline, training, physical fitness, and belief in their units. "In this last item particularly, our division has been most outstanding as we all feel completely assured that we are second to none as an American combat unit."

Unlike many divisions that went into their first battles with no combat experienced leaders, the 104th Infantry Division gathered more than a few combat veterans into its ranks from an unexpected source. Many officers and noncommissioned officers in the 1st Infantry Division who rotated back to the United States due to wounds or War Department policy managed to wangle an assignment to Allen's new division. They helped to leaven the newly trained Timberwolves. Additionally, the Assistant Division Commander, Brigadier General Bryant E. Moore, and the Artillery Commander, Brigadier General William R. Woodward, had both served combat tours on Guadalcanal. These officers and noncommissioned officers brought the reality of combat into the division's training. "The 104th Division trained under my command for a year before going into combat," Allen later wrote. "They learned all the combat tricks of the old
First Division and acquired many new tricks of their own, particularly in night combat."\(^{152}\)

The 104th Infantry Division rounded out its training at the Desert Training Center in Arizona and California in late 1943 and early 1944 before deploying to Camp Carson, Colorado, for the remainder of its stay in the United States. In April 1944 the division integrated approximately four thousand new soldiers who had come from the Army Specialized Training Program.\(^{153}\) The Timberwolves were fortunate to receive their ASTP draftees early enough to train and integrate them into their new units prior to departure overseas. In mid-August the 104th Infantry Division traveled by train to Camp Kilmer, New Jersey, in preparation for overseas deployment. The Timberwolves sailed directly from New York to the port of Cherbourg in France, where they landed on 7 September. This was the first troop convoy to sail directly to France from the United States in World War II.\(^{154}\) The Timberwolves were ready for the test of combat.

In contrast to the experience of the 104th Infantry Division, the mobilization and training of the 106th Infantry Division showed what could go wrong with the divisions of the organized reserve when they lacked solid leadership or were stripped of personnel to provide replacements for units overseas. The War Department activated the 106th Infantry Division on 15 March 1943 at
Fort Jackson, South Carolina, with cadre provided by the 80th Infantry Division. The division commander was Major General Alan W. Jones.

Jones was commissioned in 1917 through competitive examination, but he missed combat during World War I. He served in a variety of infantry regiments in the United States and the Philippines until 1924, when he attended the Infantry Officer's Course at Ft. Benning, Georgia. From 1925 to 1929 he taught in the Weapons Department at the Infantry School during the "Benning Revolution," which brought him to the attention Colonel George C. Marshall. Jones served in the Office of the Chief of Infantry in Washington for three years before attending the Command and General Staff School at Ft. Leavenworth. He then served with the 7th Infantry Regiment in Vancouver Barracks, Washington, in 1936 and 1937; his brigade commander there was Brigadier General George C. Marshall. As a field grade officer on a small post, Jones undoubtedly had many dealings with the future Chief of Staff of the Army.

Two assignments with Marshall in the interwar period practically guaranteed Jones a choice assignment in the Army of the United States during World War II. In theory all senior officers had an equal opportunity for promotion and command during the war, but in practice division commands went to officers associated with either General McNair or General Marshall. Jones' two tours with Marshall marked him
as a potential commander in an expanded Army of the United States. Jones' selection as a division commander later proved that the "system" used by the Army in World War II to select division commanders was really no system at all. Connections mattered as much as competence. Although the Army on the whole ended up with a decent set of commanders, the use of centralized command selection boards would most likely have resulted in some changes among division commanders in the Army of the United States.

Jones attended the Army War College in 1937-1938. He served with the 19th Infantry Regiment in Hawaii until 1941, when he was transferred to Washington for duty with the Training Branch, G-3, War Department General Staff. He moved over to the Headquarters of Army Ground Forces in 1942, where he worked under General McNair. Jones' connections with Marshall and McNair paid off in June 1942 when he received his first star and became Assistant Division Commander of the 90th Infantry Division, a position he held until his selection as division commander of the 106th Infantry Division in 1943. He would enter combat in 1944 as green as his division, a not uncommon experience in the Army of the United States during World War II.

The 106th Infantry Division went through mobilization training at Fort Jackson before departing for the Tennessee Maneuver Area in January 1944. There the division took part in maneuvers with the 26th and 78th Infantry Divisions and
the 17th Airborne Division. By the conclusion of the maneuvers in March 1944, the 106th Infantry Division was an average, trained division and ready for combat.156

When the division moved to Camp Atterbury, Indiana, in late March 1944, the personnel raids began. Although the War Department did not require the "Golden Lions" to furnish a cadre to form another division, it combed the personnel of the 106th Infantry Division for replacements. The division furnished 3,145 replacements in April, 877 in May, 195 in June, 136 in July, and 2,894 in August—a total of 7,247 men, or 60 percent of the division's enlisted strength.157

The challenge facing Jones and his leaders was to train the men sent to fill the division before it left the United States for overseas duty. These men came from the Army Service Training Program, the ground establishment of the Army Air Forces, anti-aircraft and coastal artillery units, and the Army Service Forces.158

The 106th Infantry Division never recovered from the raids upon its personnel. When Lieutenant General Ben Lear and his staff inspected the division in September 1944, they found a division unprepared for combat. Lear stated:

The division has not yet reached the peak of its training or its efficiency. You haven't much time left, and you must get busy with tank-infantry as well as all other forms of training. If you do not, you will ruin the reputation of your division. Wonderful things were expected of your division. We have had too much to complain about. It's your fault.159
General Lear was only partly correct, however. The 106th Infantry Division had already reached the peak of its training during the Tennessee maneuvers. Unfortunately, the division needed to repeat much of its earlier training to indoctrinate the thousands of new personnel received since then. This training would take time. When the War Department alerted the division for overseas movement in October 1944, however, time ran out on the Golden Lions.
ENDNOTES


2. See map of maneuver areas in Army Ground Forces, Statistical Data (Washington: HQ, Army Ground Forces, 1945), copy located in U.S. Army Center of Military History.

3. The 9th Infantry Division at Camp Bragg, North Carolina, is one example. "Activation and Reorganization Information," 3-4, File 309-0.19, Box 7327, Record Group 407, National Archives, MMRB.

4. See Appendix A.


6. War Department, "Reports from Triangular Divisions," 18 December 1939, 1, File 301-0.3.0, Box 5663, Record Group 407, National Archives, MMRB.

7. Ibid., 5.

8. HQ, 1st Infantry Division, "Triangular Division," 25 May 1940, 1, File 301-0.3.0, Box 5663, Record Group 407, National Archives, MMRB.

9. HQ, 1st Infantry Division, "Partial Final Report--Third Army Maneuvers," 22 May 1940, 7, File 301-0.3.0, Box 5663, Record Group 407, National Archives, MMRB.

10. HQ, 1st Infantry Division, "Triangular Division," 5.

11. HQ, 1st Infantry Division, "Final Report--Army and Navy Joint Exercise No. 7," 1941, 2:1, File 301-0.3.0, Box 5663, Record Group 407, National Archives, MMRB.

12. 1st Infantry Division, "Final Report--Army and Navy Joint Exercise No. 7--1st Div. Task Force," 1941, File 301-0.3, Box 5662, Record Group 407, National Archives, MMRB.

13. For a thorough analysis of the Louisiana and Carolina Maneuvers of 1941, see Christopher R. Gabel, The U.S. Army GHQ Maneuvers of 1941 (Washington: Center of Military History, 1941).

14. HQ, 1st Infantry Division, "Report on First Army Maneuvers, 1941," 1 December 1941, File 301-0.3.0, Box 5663, Record Group 407, National Archives, MMRB.
15. Ibid., 3.

16. Ibid., 10.


18. HQ, 1st Infantry Division, "Report of G-3 Section," 17 January 1942, File 301-0.3, Box 5662, Record Group 407, National Archives, MMRB.

19. Except where noted, the following biographical data is taken from the biographical sketch of Gen. Allen located in The Terry de la Mesa Allen Papers, USAMHI.

20. Major General (Ret.) Terry Allen to Major Fred Dunham, undated memo, The Terry de la Mesa Allen Papers, USAMHI.

21. Letter, Quentin Reynolds to Mrs. Terry Allen, 20 June 1944, The Terry de la Mesa Allen Papers, USAMHI.

22. The cadre come from a variety of old army posts: Camp Custer, Michigan; Fort Thomas, Kentucky; Fort Benjamin Harrison, Indiana; Fort Sam Houston, Texas; Fort Warren, Wyoming; Fort Snelling Minnesota; Fort DuPont, Delaware; Fort Moultrie, South Carolina; Fort Devens, Massachusetts; Madison Barracks, New York; and Fort D.A. Russell, Texas, to name a few. "Activation and Reorganization Information," 1-2, File 309-0.19, Box 7327, Record Group 407, National Archives, MMRB.

23. Ibid., 3-4.

24. The 60th Infantry Regiment, for example, trained 1800 volunteer recruits and 1807 draftees. "Regimental History, Sixtieth Infantry, 1940-1942," 1-2, File 309-INF(60)-0.1, Box 7535, Record Group 407, National Archives, MMRB.


26. W.F. Damon and Claud P. Brownley, "9th Reconnaissance Troop on Maneuvers," *Cavalry Journal* 50, no. 5 (Sep.-Oct. 1941): 86-88. The recon troop trained with only four of 16 authorized radios, and no .50 caliber machine guns were available to the unit for the first year of its existence.

27. Major General Rene E. DeRussy Hoyle was a member of the United States Military Academy class of 1906. His father and grandfather were both graduates of West Point, in 1875
and 1812, respectively.


31. Ibid., 161.

32. Ibid., 174.

33. "Regimental History, Sixtieth Infantry, 1940-1942," 2, File 309-INF(60)-0.1, Box 7535, Record Group 407, National Archives, MMRB.

34. 9th Infantry Division, "General Order 31," 3 December 1941, File 309-1.13, Box 7329, Record Group 407, National Archives, MMRB.


36. Ninth Medical Battalion, "Battalion History," 1942, 3, File 309-MED-0.1, Box 7544, Record Group 407, National Archives, MMRB.


39. Major General R.E.D. Hoyle went on to finish his career in command of a field artillery replacement training center.


44. This excerpt from the memorandum from Lieut. Gen. McNair to Gen. Marshall is contained in a memorandum from Major Bell I. Wiley, War Department Historical Section, to Colonel Rogers, G-2, SUBJECT: Training of National Guard Units, 21 April 1945, AGF 314.7, Entry 16, Box 4, Record Group 337, National Archives.

45. This excerpt from the memorandum from Lieut. Gen. McNair to Gen. Marshall is contained in a memorandum from Major Bell I. Wiley, War Department Historical Section, to Colonel Rogers, G-2, SUBJECT: Training of National Guard Units, 21 April 1945, AGF 314.7, Entry 16, Box 4, Record Group 337, National Archives.

46. This excerpt from the memorandum from Gen. Marshall to Under Secretary of War Patterson is contained in a memorandum from Major Bell I. Wiley, War Department Historical Section, to Colonel Rogers, G-2, SUBJECT: Training of National Guard Units, 21 April 1945, AGF 314.7, Entry 16, Box 4, Record Group 337, National Archives.


48. World War II Combat Effectiveness Questionnaire, Col. (Ret.) Robert C. Works, USMA 1938. Col. Works went on to serve as G-2 and infantry battalion commander in the 10th Mountain Division in the United States and Italy, where he earned two Silver Stars.

49. See Appendix A.

50. 29th Infantry Division, "Division History," 1943, 1, File 329-0.1, Box 8623, Record Group 407, National Archives, MMRB.

51. The divisional history reads, "Vital training was obtained on these maneuvers but they were child's play compared with what was to come next." Ibid., 2.

52. Ibid., 4.

53. Ibid. Gen. Reckord had commanded the 115th Infantry Regiment of the 29th Division in World War I.

54. Ibid., 5.

55. Ibid., 8.


60. "Division History," 11-17.

61. Ibid., 50-51.

62. Ibid., 20.

63. Ibid., 22.


66. Ibid., 25.

67. HQ, 29th Infantry Division, "Division Diary," entry for 5 January 1943, File 329-0.3.0, Box 8626, Record Group 407, National Archives, MMRB.

68. "Division History," 33.

69. Ibid., 42.


71. The following biographical information is taken from the unpublished memoirs of Charles H. Gerhardt located in The Charles H. Gerhardt Papers, USAMHI.

72. Ibid., 39.


74. Gerhardt, "Memoirs," 36; HQ, 29th Infantry Division, Training Circular #115, 13 November 1943, File 329-3.0, Box 8641, Record Group 407, National Archives, MMRB.
75. Letter, Colonel(Ret.) Glover S. Johns, Jr., to Mr. Robert Hawk, 23 March 1970, The Charles H. Gerhardt Papers, USAMHI.

76. Cawthon, Other Clay, 27.

77. Balkoski, Beyond the Beachhead, 63.

78. The following two paragraphs are based on the "Confidential Notes on the 29th Division."

79. Ibid.

80. Ibid.

81. Balkoski, Beyond the Beachhead, 54-56.

82. "Division Diary," entry for 2 November 1943.

83. HQ, V Corps, "Report of Exercise 'DUCK'," 10 January 1944, File 329-3.0, Box 8641, Record Group 407, National Archives, MMRB.

84. Ibid., 3.

85. HQ, V Corps, "CRITIQUE," 28 January 1944, 17, File 329-3.01, Box 8642, Record Group 407, National Archives, MMRB.

86. Ibid., 18.

87. HQ, 29th Infantry Division, "Exercise DUCK 2," 17 February 1944, File 329-3.01, Chief Umpire report, Box 8642, Record Group 407, National Archives, MMRB.

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89. Ibid., Annex XII.

90. HQ, 29th Infantry Division, "Critique--Exercise 'FOX'," 15 March 44, 1, File 329-3.01, Box 8642, Record Group 407, National Archives, MMRB.

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92. Ibid., 8.


94. Cawthon, Other Clay, 38.


97. HQ, 30th Infantry Division, "Record of Events," 3 March 1944, 1, File 330-0.1, Box 8723, Record Group 407, National Archives, MMRB.

98. HQ, Second Army, "Comments by the Army Commander on Second Army Field Training," 28 June 1941, 3, File 330-0.3.0, Box 8724, Record Group 407, National Archives, MMRB.

99. Ibid., 4.

100. Harrison, Oral History, 25.

101. General Headquarters, U.S. Army, "Complaints from Soldiers," 8 September 1941, File 330-0.3.0, Box 8724, Record Group 407, National Archives, MMRB.

102. HQ, I Army Corps, "Condition of the 30th Infantry Division," 26 March 1942, File 16A, Box 60, Record Group 337, National Archives.

103. "Record of Events," 2; HQ, 119th Infantry Regiment, "History," 1943, File 330-INF(119)-0.1, Box 8908; HQ, 30th Infantry Division, "Resume of State of Training of 30th Division," 11 September 1942, 1, File 330-0.3.0, Box 8727, Record Group 407, National Archives, MMRB.

104. Ibid; "Regimental History of the 120th Infantry," 1944, 3, File 330-INF(120)-0.1, Box 8917, Record Group 407, National Archives, MMRB; History of the 117th Infantry, 22.

105. The following biographical information located in File 330-0.1, Box 8723, Record Group 407, National Archives, MMRB.


107. Ibid., 230.

108. Ibid., 26-27.

109. Ibid., 28-29.
110. HQ, VII Corps, "Infantry Battalion Field Exercise Tests, 30th Infantry Division," 29 June 1943, File 330-0.3.0, Box 8727, Record Group 407, National Archives, MMRB.

111. Harrison, Oral History, 231.


113. History of the 117th Infantry, 22.


117. Ibid., 148.

118. Ibid., 2.

119. Ibid.

120. HQ, 90th Infantry Division, "Brief History of the 90th Division since Reactivation," 27 April 1944, 1, File 390-0.1, Box 13278, Record Group 407, National Archives, MMRB.

121. Ibid., 1-2.

122. War Department, "Designation of Parent Units," 1 May 1942, File 390-0.19, Box 13285, Record Group 407, National Archives, MMRB.

123. HQ, Army Ground Forces, "Armored and Motorized Divisions," 7 August 1942, File 390-0.19, Box 13285, Record Group 407, National Archives, MMRB.


125. Ibid., 12.

126. HQ, VIII Corps, "Additional Comments on 90th Division D-1 Maneuvers," 20-31 December 1942, 2, File 390-3.0, Box 13300, Record Group 407, National Archives, MMRB.

127. HQ, VIII Corps, "Notes on Attack Phase of 90th Division Problem," 29-30 December 1942, 3, File 390-3.0, Box 13300, Record Group 407, National Archives, MMRB.
128. Ibid.
129. HQ, VIII Corps, "D-3 Problem 90th Division," 7-9 January 1943, 1, File 390-3.0, Box 13300, Record Group 407, National Archives, MMRB.
130. Ibid., 2-3.
131. HQ, VIII Corps, "D-4 Problem with 90th Division," 10-12 January 1943, 4, File 390-3.0, Box 13300, Record Group 407, National Archives, MMRB.
132. Ibid.
133. HQ, VIII Corps, "Notes on Attack Phase of 90th Division Problem," 2.
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137. Ibid., 4-5.
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142. Ibid., 12.
143. Copies of these pamphlets are located in The Terry de la Mesa Allen Papers, USAMHI.
144. Memo, Major General (Ret.) Terry Allen to Major Fred Dunham, Command and General Staff College, Ft. Leavenworth, KS, undated, copy located in The Terry de la Mesa Allen Papers, USAMHI.
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148. Ibid., 28.

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150. HQ, 104th Infantry Division, Trail of the Timberwolves (San Luis Obispo, CA: 1945), 12-13.

151. Letter, Major General Terry de la Mesa Allen to Mr. Quentin Reynolds, 13 June 1944, The Terry de la Mesa Allen Papers, USAMHI.

152. Letter, Major General (Ret.) Terry Allen to Mr. Paul Miller, 23 July 1947, The Terry de la Mesa Allen Papers, USAMHI.


155. Biographical material extracted from the Alan W. Jones Papers, USAMHI.


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159. "Notes of General Lear's Conference with 106th Infantry Division, Camp Atterbury, Indiana," 8 September 1944, AGF 333.1, Entry 16, Box 12, Record Group 337, National Archives.
CHAPTER IV
FIRST BATTLES: NORTH AFRICA AND SICILY

Nearly every military organization has problems upon its initial entry into combat. Those units that can successfully cope with the shock of battle and integrate the hard lessons learned into their future operations succeed, those that do not court disaster. In North Africa and Sicily in 1942 and 1943, American infantry divisions learned many tough lessons in their first and subsequent battles with seasoned German units. The cost was often high in terms of soldiers wounded and killed, and in a few cases the cost was exorbitant. The campaigns in the North African and Mediterranean Theater of Operations, however, gave the Army of the United States much-needed combat experience upon which it could build for the future. Many infantry divisions that fought in these battles went on to establish solid reputations, among them the 1st, 3d, 9th, and 45th Infantry Divisions, all of which eventually transferred to the European Theater of Operations to fight the Wehrmacht in the climactic campaigns for France and Germany in 1944 and 1945.
The invasion of North Africa--Operation TORCH--was the result of President Franklin D. Roosevelt's desire to see American ground forces engaged in combat against Axis troops somewhere in Europe or North Africa before the end of 1942, coupled with British unwillingness to consider a cross-Channel invasion before 1943 at the earliest. President Roosevelt feared that unless American forces became involved in a campaign against Germany soon, public pressure in the United States would force the diversion of more military assets to fight the Japanese in the Pacific. The British did not believe a cross-Channel invasion was either possible or desirable until attrition on the Eastern Front and on the periphery of Europe had reduced the number and quality of German forces available to defend France. Operation TORCH was therefore a compromise between military reality and political expediency.¹

The decision to invade North Africa in 1942 probably saved Allied forces from catastrophe had they invaded France in 1943, for Operation TORCH uncovered serious weaknesses in Allied joint and combined operations, combined arms training, and small unit leadership. Had the French army put up serious resistance, American forces would have been hard-pressed to establish themselves ashore. Except for isolated incidents, resistance was light, and the French quickly agreed to an armistice. For the men of the 1st, 3d, and 9th Infantry Divisions, the invasion gave them valuable
if limited experience, and the success of the operation engendered some confidence in their abilities. Nevertheless, the invasion hardly went smoothly for the American forces, whose weaknesses became all too apparent in the first battles in Tunisia several months later.

The 1st Infantry Division began its journey to North Africa in Scotland, where the division conducted an amphibious landing exercise on 18-19 October 1942. The Big Red One embarked on twenty ships and sailed from the Clyde on 26 October with a British naval escort. After an uneventful voyage, the division landed without serious opposition on "Y" and "Z" beaches to the west and east of Oran, respectively, in the early morning darkness of 8 November (Figure 2). The 18th Infantry Regiment ran into stiff French resistance at St. Cloud, which Major General Terry de la Mesa Allen quickly ordered contained by one battalion and then bypassed. Two days later, American troops entered Oran and the French agreed to a cease-fire.²

The 3d and 9th Infantry Divisions, along with elements of the 2d Armored Division, were part of Major General George S. Patton's Western Task Force, which embarked from the East coast of the United States. The 3d Infantry Division, under the command of Major General Jonathan W. Anderson, had undergone its amphibious training on the West coast of the United States in conjunction with the 2d Marine Division. As the major part of Sub-Task Force BRUSHWOOD,
MEDITERRANEAN SEA

ALGERIA

BEACH Y

ORAN

ST CLOUD

ARZEW

BRACH Z

FIGURE 2
THE 1ST INFANTRY DIVISION IN OPERATION TORCH
its mission would be to land at Fedala in French Morocco and then attack south to seize the port of Casablanca (Figure 3). Upon landing at 0500 hours on 8 November, the "Rock of the Marne" suffered the loss of a large percentage of its landing craft due to a high surf and rocky beach, which slowed the division's build-up and delayed the attack towards Casablanca. The 3d Infantry Division managed to push south to the outskirts of the city by 10 November, and a day later the French agreed to an armistice which ended hostilities.

The plan for Operation TORCH did not envision the use of the 9th Infantry Division as an integral unit. Instead, the plan broke the division into regimental combat teams (RCTs), which normally consisted of an infantry regiment, a field artillery battalion, an engineer platoon, and a medical collecting company. American planners provided substantial reinforcements to strengthen the standard combat teams with tanks, reconnaissance troops, antiaircraft guns, signal units, aviation, military intelligence, and civil affairs personnel. These regimental combat teams would invade North Africa under the command of task force commanders: the 39th RCT would form part of the force gathered to invade Algiers in the Mediterranean Sea, while the 47th and 60th RCTs were part of the Western Task Force that would invade French Morocco from the Atlantic Ocean.
FIGURE 3
THE 3D INFANTRY DIVISION IN OPERATION TORCH
After deploying to Great Britain shortly before the invasion, the 39th RCT had a rough voyage to Algiers. On 7 November a torpedo hit the USS *Thomas Stone*, which carried the 2d Battalion, 39th Infantry Regiment. The remainder of the combat team landed on the beaches at Ain-Taya, 15 miles east of Algiers, on 8 November. The boat waves lost all semblance of organization, and soldiers and equipment ended up strewn over three different beaches. The further down the chain-of-command one went, the more critical were the officers of the results of the operation. Second Lieutenant G.B. Beasley stated, "There was too much confusion and congestion when we first got on the beach. There were too many men giving orders which confused the soldiers and they didn't know who to follow." Many units spent several hours just sorting themselves out after the Navy landed them haphazardly on the beaches.

Even after the battalions established themselves ashore, their performance was far from sparkling. A few French soldiers held up 3d Battalion for several hours, and when the battalion attempted to bypass the resistance at night, it got lost. The success of the operation, however, boosted morale. Second Lieutenant Bernie L. Bogue summed up his feelings at the moment: "Morale is still high. We are very thankful and pleased that we are here, that we are alive, that we are Americans."
The other two combat teams of the 9th Infantry Division departed for Norfolk, Virginia in mid-October, loaded aboard transports, and sailed for a convoy rendezvous in Chesapeake Bay. The 47th RCT formed part of Sub-Task Force BLACKSTONE, with the mission of seizing the port of Safi, French Morocco. The 60th RCT formed part of Sub-Task Force GOALPOST, under the command of Brigadier General Lucian K. Truscott, Jr. His force had the mission of seizing Port Lyautey, French Morocco. Upon reaching Solomon's Island in Chesapeake Bay, Truscott had his men rehearse the landing operation in conjunction with the crews of the transport vessels. The rehearsals exposed many faults in the organization and training of the transport crews and assault force, and commanders were able to make some corrections prior to sailing overseas. On 23 October the Western Task Force departed from the United States in convoy, bound for North Africa.

The 47th RCT, under the command of Colonel Edwin H. Randle, conducted the smoothest landing in the invasion at Safi, French Morocco (Figure 4). Companies K and L landed between 0435 and 0445 hours directly in the harbor of Safi from the decks of the destroyers Bernadou and Cole, surprised the French defenders, and quickly took possession of the harbor facilities. The remainder of the regiment landed behind schedule during the morning hours. By mid-afternoon the 47th RCT had subdued all organized French
FIGURE 4
THE 47TH REGIMENTAL COMBAT TEAM IN OPERATION TORCH
resistance in Safi. The tanks of the 2d Armored Division began to unload, and reconnoitered east towards Marrekech.\textsuperscript{10}

The 60th RCT met the toughest resistance of any unit in the 9th Infantry Division during Operation TORCH. Like the other units in the division, the 60th RCT landed late on its beaches west of Port Lyautey, French Morocco (Figure 5). The assault ships had lost formation at night, and consequently the Navy had difficulty forming the correct landing waves according to the invasion plan. Wave commanders had problems finding the correct beaches. Instead of advancing towards their objectives in darkness, the disorganized American forces ended up conducting a daylight assault. "This loss of direction and control by assault waves made the whole landing operation a hit or miss affair that would certainly have spelled disaster against an alert and well armed enemy."

The combat team encountered severe resistance from French infantry and tanks, and did not secure its objectives until 10 November. Perhaps because the 60th RCT had the toughest combat, it learned the most from its experience. Communications from ship to shore were inadequate, radios drenched by salt water worked poorly or not at all, and commanders had to exercise personal control on shore to be effective.\textsuperscript{12} The combat team learned the value of close cooperation between tanks and infantry and the armor of the 70th Tank Battalion
FIGURE 5
THE 60TH REGIMENTAL COMBAT TEAM IN OPERATION TORCH
proved its worth in many actions. The units began to appreciate the destructive firepower of artillery, self-propelled guns, naval gunfire, and aircraft. The 2.75 inch rocket launcher was a welcome addition to infantry squads, since it provided a lightweight, mobile source of fire support for small units. Support troops learned the importance of infantry training, as commanders often used them as reserves during critical points in the fighting.\textsuperscript{13}

The combat team also learned a great many lessons about amphibious operations, although the division did not participate in another seaborne assault during the war. One of the critical lessons was the impact of unit cohesion on an amphibious landing. "When a soldier lands," the sub-task force after-action report stated, "after a long sea voyage, on a strange beach, in utter darkness, he should be surrounded by men he knows and under leaders he has learned to respect and trust. Leaders of all ranks should know their personnel from long association and training."\textsuperscript{14} Unfortunately, the hasty mobilization for war precluded many divisions from achieving a period of "long association and training" which the 9th Infantry Division found so helpful in combat.

The 1st Infantry Division also learned important lessons from TORCH, which proved the soundness of the division's previous training in amphibious operations. Planners would subsequently ignore some recommendations,
such as the need to reduce the amount of equipment carried by individual soldiers in the initial landing waves and the need for waterproof casings for radio sets.\textsuperscript{15} A year and a half later in Normandy, both problems would again plague the division on D-Day. General Allen also noted "certain weaknesses in the proper employment of fire and movement for infantry units," a problem that existed Army-wide.\textsuperscript{16} In addition, Allen stated, "The present prescribed system of securing air support through the higher echelons is too cumbersome and too slow."\textsuperscript{17} Unfortunately, the provision of close air support to army ground forces would remain inadequate throughout the North African campaign, and indeed the Army Air Forces would not fix the system until after the invasion of Normandy in June 1944.

After the successful invasion of North Africa, Allied troops attacked east in a race with the German army to seize Tunisia. The Germans won the race in December, and Allied troops had to halt while their commanders accumulated supplies and reinforcements for another offensive to take the ports of Bizerte and Tunis. Unfortunately for the II(US) Corps, the enemy struck first on 14 February along the Eastern Dorsal of the mountains in central Tunisia (Figure 6). The resulting battle of Kasserine Pass was the worst defeat suffered by American ground forces in World War II, but fortunately the battle ended without the Germans gaining a clear operational or strategic advantage from it.
THE DORSAL POSITIONS IN CENTRAL TUNISIA
13-18 February 1943

FIGURE 6
GERMAN COUNTERATTACK IN TUNISIA, FEBRUARY 1943

For American forces, the battle served as a brutal schooling in the essentials of combat against an experienced enemy.18

The experience of the 34th Infantry Division exemplified the problems of the hastily-mobilized, inadequately trained American infantry at Kasserine Pass. The "Red Bull" Division, composed of units recruited from the upper Midwest, was a typical National Guard division. Supply problems and inadequate training facilities hampered the mobilization of the division upon activation in January 1941. The division soon moved to Camp Claiborne, Louisiana, for mobilization training, but personnel turnover limited the effectiveness of the training program. During the Louisiana maneuvers in the fall of 1941, the division spent nearly the entire time in V Corps reserve. Combined arms training was inadequate. Only partially trained, poorly equipped, and in the midst of reorganization to a triangular configuration, the 34th Infantry Division deployed to the United Kingdom between January and May 1942. Lack of equipment and training areas and the siphoning of hundreds of the best soldiers to form the first Ranger battalions hampered the division's readiness prior to its deployment to North Africa.19

The 168th Regiment of the 34th Infantry Division participated in TORCH at Algiers, but learned little from its brief entry into combat. Two days prior to the
beginning of the battle of Kasserine Pass, the regiment received 450 poorly trained replacements and its first shipments of the 2.75 inch anti-tank rocket launcher known as the bazooka. Needless to say, the regiment had assimilated neither the new soldiers nor the new equipment when the battle began. The Germans quickly surrounded the 2d and 3d Battalions along with the Regimental Headquarters, which surrendered on 17 February (Figure 7). The regiment lost 2,200 men, 1,400 of whom were prisoners. "It took the remnants of the 168th Regiment a month to rebuild, refit, and process replacements. In essence, it became a new unit; the 168th Regiment of the Iowa National Guard was destroyed." This process repeated itself sooner or later in every National Guard division in the Army of the United States. By the end of the war, there were no appreciable differences in the personnel composition of the sixty-six standard American infantry divisions.

The debacle at Kasserine Pass damaged the reputation of the American army in the eyes of their British allies, but II(US) Corps recovered quicker than the British opinion of it. Lieutenant General George S. Patton, Jr., took command of the corps in place of Major General Lloyd R. Fredendall and immediately began its rehabilitation. One immediate change was the consolidation of American divisions; no longer would they fight with their various components parcelled out piecemeal across the desert countryside.
FIGURE 7
THE 168TH REGIMENTAL COMBAT TEAM
AT SIDI BOU ZID, 14-15 FEBRUARY 1943

A month after Kasserine, II(US) Corps attacked towards El Guettar to draw off enemy reserves facing the British Eighth Army in southern Tunisia (Figure 8). On the morning of 23 March, the Afrika Korps counterattacked with the 10th Panzer Division against the southern flank of the 1st Infantry Division. The Big Red One not only held off the enemy attack, but inflicted substantial tank and personnel losses on the enemy force. The 18th RCT jubilantly reported, "Our artillery crucified them with HE shells and they were falling like flies." Allied air support was much improved from Kasserine, although the enemy still had air parity and was able to use dive bombers to strike forward positions. The bombing had little effect on the soldiers of the 1st Infantry Division, who proved that well-trained and led American soldiers could succeed in their first battles if employed properly.

Regular Army divisions also had their problems upon entry into combat. As other Allied forces advanced into Tunisia, the 9th Infantry Division settled down in Morocco and Algeria to guard lines of communication and train. When the German forces attacked and overran several American units in the battle of Kasserine Pass, the Allied command ordered the artillery of the 9th Infantry Division to march to Tunisia to reinforce the line. The other elements of the 9th Infantry Division moved to Tunisia in the wake of the artillery. On 28 March, the division’s mission was to
FIGURE 8
THE BATTLE OF EL GUETTAR, 16-23 MARCH 1943
attack the German positions east of El Guettar in conjunction with the 1st Infantry Division (Figure 9). For the next ten days II Corps fought for control of the high ground against well-fortified German resistance. Only the success of the British Eighth Army finally forced the Germans to retreat from their positions.25

The 9th Infantry Division's performance in the battle of El Guettar left much to be desired. The 39th RCT had recently rejoined the division after an absence of nearly six months. The employment of the 39th RCT as a guard force in the two months after TORCH did nothing to develop the combat effectiveness of the organization. The 39th Infantry could not even train to assimilate the lessons learned from the brief period of combat it had witnessed. The division also lacked adequate maps for the El Guettar area, and the maps that were available contained many inaccuracies. On the first morning of the attack the lead battalion of the 47th Infantry Regiment reported inaccurately that it had reached its objective. When the Germans on the objective halted its progress, the 3d and 2d Battalions maneuvered to outflank the enemy from the south. 3d Battalion captured the ridge, but elements of the 10th Panzer Division caught the 2d Battalion in an engagement area and destroyed Company E. The remainder of the battalion lost contact with the division for 36 hours. When Major General Manton S. Eddy committed the 1st Battalion, 39th Infantry to extend the
ACTIONS NEAR EL GUETTAR
28 March - 1 April 1943
US ROUTE OF ADVANCE, DATE INDICATED
GERMAN-ITALIAN FRONT LINE, 26 March
GERMAN-ITALIAN FRONT LINE, 1 April
Elevations in meters

FIGURE 9
THE BATTLE OF EL GUETTAR, 28 MARCH - APRIL 1943

envelopment even further to the south, it too became lost.\textsuperscript{26}

The next day, 29 March, the situation became even worse. The Germans ambushed the 2d Battalion, 39th Infantry as it moved forward along the El Guettar-Gabes road in trucks. The battalion sustained heavy losses and became badly demoralized. The 1st and 3d Battalions, 47th Infantry Regiment could not dislodge the German defenders from their positions. The 1st Battalion, 39th Infantry, and the 2d Battalion, 47th Infantry, remained out of contact. The division regrouped during the night and finally made contact with the two "lost" battalions. On 30 and 31 March the division made little progress. II Corps was out of touch with the situation, for on 1 April Patton ordered the 9th Infantry Division to proceed with the second phase of the corps plan, which called for the 1st Armored Division to pass through the 9th Infantry Division after the latter had opened a hole wide enough for exploitation. But until the Americans controlled the high ground around Hills 369 and 772, the armor would go nowhere.\textsuperscript{27}

On 3 April, II Corps placed the entire corps artillery under the control of the 9th Infantry Division. A massive barrage hit the German positions on Hill 369, but the 47th Infantry Regiment was slow to follow the artillery preparation and failed to take the hill. The next day the 47th Infantry tried to infiltrate the German positions under
cover of darkness, but again failed to dislodge the defenders. Only after the Germans withdrew from their positions on 6 April did the division make any progress. Soon thereafter, II Corps received replacements of men and equipment in preparation for a move to the north for the final operation in North Africa, an attack towards Bizerte.28

The 9th Infantry Division's introduction to combat was neither easy nor cheap. Not counting the casualties suffered by the detached 60th RCT, the division lost 120 killed, 872 wounded, 316 missing, 186 injured, 207 exhaustion cases, and 111 non-battle casualties. Since 425 men returned to duty within 30 days, the net loss for the division was about 10 percent of its strength. The 39th and 47th Infantry Regiments sustained 98 percent of these losses. Five out of six infantry battalion commanders in these two regiments were out of action (two wounded, one case of combat fatigue, one captured, and one missing). Of 207 cases of combat fatigue, only about 40 percent returned to their units after the battle.29

The division learned basic, but crucial, lessons in the battle of El Guettar. Commanders need to perform reconnaissance early and then take the time to perfect their plans and issue orders. II Corps rushed the 9th Infantry Division into battle, and the division had to rely on intelligence gathered by the 1st Infantry Division, most of
which was incorrect. During its attack the 9th Infantry Division failed to take the dominating high ground. As a result, German artillery observers poured fire onto the attackers and the division ended up assaulting enemy positions frontally. Artillery fire alone could not dislodge the defenders from their well-fortified positions (some of which the Germans had blasted into solid rock). Infantry needs to follow closely behind its artillery preparation, a basic lesson from World War I that American soldiers unfortunately had to relearn in World War II. The division after-action report ended on a positive note. "Opposing crafty and veteran soldiers, our troops showed courage and ability. With one battle behind them, they were now ready to enter the next operation a wiser and more able fighting unit." The battle was a costly lesson in the basics of modern warfare.

The 1st Infantry Division also learned important lessons at El Guettar. The division's after-action report noted, "Germans are a tenacious group of fighters and organize small islands of resistance which include mostly machine guns and machine pistols, well wired in. They are well supported by mortars and artillery and cannot be attacked frontally. They must be fixed by fire and outflanked...The German soldier is a determined fighter under almost all conditions." The tactics needed to overcome a well-entrenched German defense required a high
level of small unit leadership, but until American units
gained combat experience, aggressive leadership was not
always forthcoming. The division report continued:

The American soldier has had his first real
fight with a determined enemy; his mistakes were
many as were his attributes. His use of cover
which was poor initially became excellent after
the first skirmish. The use of a base of fire
with a maneuver unit was not properly employed
initially, but as time went on and the futility of
frontal attacks was impressed on each soldier,
groups as small as two men would apply the basic
principle of using one man to fire while the other
got behind. The use of mortars and automatic
weapons by the enemy taught our soldiers lessons
the application of which increased the efficiency
of the close infantry support weapons
tremendously.32

The great advantage formations such as the 1st and 9th
Infantry Divisions had over most other American infantry
divisions in Europe is that they were able to learn such
basic lessons of combat before they landed in Normandy in
June 1944.

After El Guettar, II Corps, under the command of Major
General Omar N. Bradley as of 15 April, moved into northern
Tunisia and prepared for its upcoming attack towards Bizerte
(Figure 10). The 1st and 9th Infantry Divisions were to
attack on line, but due to the terrain and road networks
there was only a tenuous connection between the two
units.33 The 1st Infantry Division, whose mission was to
seize the high ground astride the upper Tine river valley
(an area dubbed "The Mousetrap"), would conduct the main
attack. II Corps' reinforced its four divisional artillery
II CORPS OPERATIONS IN NORTHERN TUNISIA, 23 APRIL–3 MAY 1943
battalions with six light (105mm) and five medium (155mm) artillery battalions. Behind the Big Red One, the 1st Armored Division waited to exploit any penetration towards Mateur. The 34th Infantry Division was initially in corps reserve.

Following an intensive artillery preparation on the morning of 23 April, the soldiers of the 1st Infantry Division attacked the heavily fortified enemy positions along the chain of hills covering the road to Mateur. Lieutenant General Lesley J. McNair, Commanding General of Army Ground Forces, was wounded by artillery fire while observing the attack of the 16th Infantry Regiment. After three days of heavy fighting, the German defenders fell back four miles, but still had good positions on high ground with interlocking fields of fire. To put more strength behind the attack, on 26 April Bradley inserted Major General Charles W. Ryder’s 34th Infantry Division between the 1st and 9th Infantry Divisions. Ryder’s mission was to seize Hill 609, the key position in the German defensive network (Figure 11).

The initial attack by the 34th Infantry Division met with failure. The Germans used a reverse slope defense to defend their positions, thereby negating any firepower advantage the American forces might have while attacking the forward slope of the hill. Timely enemy counterattacks often forced American troops to relinquish hard-won
FIGURE 11
THE BATTLE FOR HILL 609, 27 APRIL—1 MAY 1943
objectives. American infantry units needed a more mobile, direct fire weapons system to support their attacks. Reinforced by a company of medium tanks from the 1st Armored Regiment, the 1st Battalion, 133d Infantry Regiment was finally able to gain the summit of Hill 609 on 30 April. Unfortunately, this lesson in tank-infantry coordination was lost on the Army as a whole. Not until several weeks into the Normandy campaign would the Army put much-needed emphasis on infantry-tank training in combined arms attacks.

With the high ground in American possession, the artillery of the 1st and 34th Infantry Divisions shattered enemy attempts to counterattack the next day. General Bradley then unleashed Major General Ernest N. Harmon's 1st Armored Division, which seized Mateur on 3 May. The honor of taking Bizerte, however, would fall to the 9th Infantry Division, which fought a skillful battle in the northern portion of the II Corps' zone to open the way to the city.

The 9th Infantry Division faced fortified German positions on two hill masses (nicknamed Green and Bald Hills) that dominated the road leading to Mateur and Bizerte (Figure 12). The British had unsuccessfully attempted to assault these hill positions three times already. General Eddy had learned enough from El Guettar not to make a fourth effort. Instead, he planned to hold the Germans in place with the 47th Infantry Regiment, while maneuvering the 39th and 60th Infantry Regiments through the extremely rough
FIGURE 12
THE 9TH INFANTRY DIVISION IN THE SEDJENANE VALLEY
terrain of the Sedjenane Valley to the north of the German positions. Eddy decided that the potential benefits of the operation were worth the risk of moving the division out of communication with its supply and service organizations. He felt that the division could surprise the German defenders with the unexpected maneuver through "impassable" terrain.38

The 9th Infantry Division and its commander had learned their lessons well. The division made a meticulous study of the terrain and the enemy, and then completed a comprehensive plan which commanders thoroughly briefed to their men. The division obtained three hundred mules for supply and evacuation in the mountainous terrain. Between 19 and 21 April, the 60th RCT moved during hours of darkness north into the Sedjenane Valley, unobserved by German forces. The attack began on 23 April. The 47th and 60th Infantry Regiments reached their initial objectives with little opposition, but the 39th Infantry Regiment met stiff resistance. The commander of the 39th Infantry Regiment lost control of his forces and General Eddy relieved him. Brigadier General Donald A. Stroh, the assistant division commander, temporarily assumed command of the regiment and got it moving again. During the next several days, the division advanced to the east, slowed by steep hills, thick vegetation, and enemy resistance. Supply difficulties were acute.39
On 30 April the 39th Infantry took Hill 406, which overlooked the head of the Sedjenane Valley. Before the regiment lay a variety of German supply dumps and command and control installations. The 26th Field Artillery fired over four thousand rounds in a single day with devastating effect on the German rear area. Outflanked, the Germans pulled off the Green-Bald Hill positions and began to retreat. During the next several days the division reached the final German positions in the hills west of Bizerte. The 1st Battalion, 60th Infantry forced the Germans off the Djebel Cheniti on 6 May by attacking in the best fashion of the Great War with bayonets fixed one hundred meters behind a rolling artillery barrage and opened the way to Bizerte. On 7 May the first American units entered Bizerte, only to withdraw again to allow French units to claim the liberation of the city. On 8 May French forces entered Bizerte and the North African campaign came to a close.\(^{40}\)

The Sedjenane Valley campaign was a brilliant success for the 9th Infantry Division. The division suffered a net loss of 1,114 men, fewer than at El Guettar, and had accomplished all of its missions in outstanding fashion. The division's after-action report stated:

The 9th Division had demonstrated that it was able to take advantage of the lessons learned at El Guettar. It had substituted sweat for blood. It had maneuvered the Germans out of one position after another. The wide envelopment to the north undoubtedly came as a complete surprise to the enemy...commanders were given ample time to make detailed plans and reconnaissance.\(^{41}\)
The division used ample amounts of firepower; the artillery expended a total of 47,000 rounds of 105mm and 155mm artillery shells during the operation. Staff sections improvised as necessary to make the plan work. The quartermaster foraged for 22,977 pounds of hay and 85,416 pounds of barley for the mules. The signal battalion laid huge amounts of wire, which was essential because radio communications were spotty at best due to the terrain. At times there were 1,200 miles of wire on the ground. Engineers built seventy miles of roads for the artillery and supply vehicles. The medical battalion used mules to evacuate casualties and improvised a "casualty train" along a railroad track by removing the tires from a truck and placing the truck on the rails. In short, the division was learning its business.42

As much as combat itself, the digestion of combat experience during a period of training afterwards and the internalization of lessons learned through thorough after-action reviews made the 1st and 9th Infantry Divisions into two of the best units in the Army. The capable leadership of Eddy and Allen had much to do with their divisions' successes. In his memoirs, Omar Bradley showered praise on Eddy:

...there are few distinguishing characteristics of a successful division commander. Success comes instead from a well-balanced combination of good judgement, self-confidence, leadership, and boldness...of all these commanders, none was better balanced nor more cooperative than Manton
Eddy. Tactically he performed with classical maneuvers such as the one he employed at Jefna [Sedjenane Valley]. Yet though not timid, neither was he bold; Manton liked to count his steps carefully before he took them.43

Eddy did not hesitate to act when necessary, as his relief of the commander of the 39th Infantry Regiment demonstrates. His success depended as much on his ability as a trainer and administrator as it did on his competence as a tactician. Eddy was a well-balanced general officer, the perfect choice to lead a division in combat.

General Allen and his assistant division commander, Brigadier General Theodore Roosevelt, Jr., also proved effective in combat, but their leadership style differed a great deal from the unassuming Eddy. Roosevelt was a famous man in his own right: son of President Teddy Roosevelt, World War I hero, and former commander of the 26th Infantry Regiment. Allen and Roosevelt were nearly identical in temperament: fearless, aggressive, unconventional, and fiercely loyal to the soldiers under their command. Their parochialism and personality conflicts with General Bradley would end up in their relief in Sicily in August 1943. One story relates that "in North Africa a general was heard to complain that Roosevelt and Allen 'seem to think the United States Army consists of the 1st Division and 11 million replacements', which caused T.R. to retort, 'Well, doesn't it?"44 Terry Allen's leadership of the Big Red One in North Africa earned him both the ire of Bradley and the
The Army of the United States as a whole also learned a great deal from the campaign in North Africa. Immediately upon the cessation of hostilities, Allied Forces Headquarters (AFHQ) ordered each division involved in the campaign to submit a thorough report on combat experiences and lessons learned for training purposes. AFHQ published excerpts of these reports as AFHQ Training Memorandum No. 44 on 4 August 1943. The War Department reprinted the memorandum as a training manual entitled Lessons from the Tunisian Campaign on 15 October 1943 and distributed it to divisions still training in the United States. Battle experience, AFHQ and the War Department concluded, had validated existing training literature and doctrine:

In all reports of battle experience the soundness of basic principles prescribed in standard training literature has been confirmed. Failures or tactical reverses have resulted from misapplication of these principles, or from lack of judgement and flexibility in their application, or from attempts to follow book rules rigidly without due consideration of their suitability to existing situations.46

Not all observers would agree with that conclusion. Especially in the area of anti-armor tactics, North Africa proved that American doctrine could not always stand up to the rigors of modern combat.47

Many of the lessons learned repeated fundamental training concepts that units relearned the hard way on the battlefield. These lessons included the use of fire and
maneuver to advance against enemy positions, the importance of combined arms coordination, the need to train and fight at night, the use of smoke to obscure movement, and the importance of small unit training. The report of the 9th Infantry Division stressed the most important lesson learned--seize and take the high ground:

We learned that to live we must take to the ridges and advance along them, avoiding the natural 'avenues of approach' up the valleys...Taking to the ridges was tedious, strenuous business but it saved hundreds of lives and gave physical possession of the high ground.

Possession of the high ground afforded observation for forward observers, who could call in deadly artillery strikes against enemy positions. American artillery performed superbly in North Africa, as it did throughout the war. Its flexibility and ability to mass fires quickly made American artillery a formidable weapon of destruction.

On the other hand, air support of ground forces proved to be disappointing. Close air support was "not close enough." There was an excessive delay between request and execution of air missions, which caused the support to be ineffective. "The Air Corps complained on several occasions that there were no enemy where we reported them, yet their planes flew over the indicated target two or three hours after the request was made--Enemy troops move," one report stated. Unfortunately, the Army Air Forces did nothing to correct the close air support system, and the Sicilian and Italian campaigns again highlighted its faults. Not
until the breakout from Normandy in late July 1944 did the close air support system become responsive to the needs of the ground forces.

German Field Marshal Erwin Rommel gave high marks to the ability of the American units to learn from their mistakes. Rommel stated:

In Tunisia the Americans had to pay a stiff price for their experience, but it brought rich dividends. Even at this time, the American generals showed themselves to be very advanced in the tactical handling of their forces, although we had to wait until the Patton Army in France to see the most astonishing achievements in mobile warfare. The Americans, it is fair to say, profited far more than the British from their experience in Africa, thus confirming the axiom that education is easier than re-education.  

This comment is enlightening in view of the severe criticism some historians level on the tactical abilities of American units, both in North Africa and later in the war. Apparently, some commanders on the other side at the time thought differently.

American infantry divisions continued to improve in their next operation, the invasion of Sicily. Operation HUSKY grew out of decisions made by the Allies six months earlier at the Casablanca Conference. At the conference Prime Minister Winston Churchill of Great Britain had argued that the Allies should finish the campaign in North Africa and then strike at the "soft underbelly" of the Axis in the Mediterranean, with Sicily, Italy, and the Balkans as potential targets for future operations. Due primarily to
the ongoing Allied operations in North Africa, which created a momentum of their own, Prime Minister Churchill's position prevailed. The Allies agreed to invade Sicily at the conclusion of the Tunisian campaign, an agreement which effectively postponed a cross-Channel invasion into France until 1944. Fortunately, continued operations in the Mediterranean also gave American forces more time to digest lessons learned, train, and gain combat experience prior to the decisive cross-Channel invasion.

Training for the invasion of Sicily began as early as March 1943 when regiments of the 3d Infantry Division began cycling through the Fifth Army Invasion Training Center at Arzew Beach in Algeria. Training stressed physical conditioning, combined arms coordination, assault against fortifications, removal of mines and other obstacles, and ship-to-shore movement with the Navy. A complete rehearsal, Operation COPYBOOK, took place from 20-26 June. Unfortunately, lack of waterproofing materials allowed for only limited vehicle debarkation from the landing craft, but the exercise was as close to a full scale rehearsal for the upcoming invasion as possible.

In the early morning hours of 10 July 1943, British and American forces stormed ashore across the beaches of southeastern Sicily in modern history's largest amphibious assault (Figure 13). Seven allied divisions (three American, three British, and one Canadian) composed the
FIGURE 13
OPERATION HUSKY, 10 JULY 1943
seaborne echelon of Operation HUSKY, the code name for the operation, as opposed to only five in the more famous Operation OVERLORD that would take place less than a year later in Normandy. The initial landings were remarkably successful due to the absence of any stiff opposition from Italian coastal divisions in the area. Despite this initial victory, however, the Allies would take over a month to secure the remainder of the island against stiff resistance from three German panzergrenadier divisions. Sicily was a bitter victory for the Allies, but the campaign resulted in Italy's surrender and took the Allies one step closer to Berlin.\(^5\)

In the American zone, the 3d Infantry Division landed at Licata while the 1st and 45th Infantry Divisions landed near Gela. All three divisions were well-trained and capably led. General Allen's 1st Infantry Division had extensive combat experience in North Africa. The other two divisions had seen little or no combat, but would soon prove themselves in battle.

The 45th Infantry Division, the Thunderbird Division, was a National Guard unit from the American Southwest under the command of Major General Troy H. Middleton. As the youngest colonel in the AEF, Middleton had commanded an infantry regiment in the Meuse-Argonne offensive in World War I. He had retired from the United States Army in 1937 as a lieutenant colonel to take a position as dean of
administration and director of student personnel at Louisiana State University. When the Japanese bombed Pearl Harbor, he offered his services to the War Department, which reinstated him at his former grade. A competent leader, Middleton rose in rank quickly. By June 1942 he was a brigadier general and assistant division commander of the Thunderbirds; by the fall he was a major general and the division's commanding officer. According to Lieutenant General Lesley J. McNair, when the 45th Infantry Division departed the United States in June 1943, it was "better prepared than any division that has left our control to date."\

General Middleton was more critical of the division's amphibious training and deployment overseas. From the time the division debarked from the United States on 28 May 1943 until its landing in Sicily on 10 July, the troops remained embarked except for one week in North Africa. "This long period during which troops were aboard ship needs no comment," Middleton bitterly remarked in his report. Furthermore, he felt the division could have received better amphibious training had it deployed earlier to North Africa instead of training on the eastern seaboard of the United States. "In the case of the 45th Division," Middleton remarked, "I believe we could have accomplished in two weeks in North Africa more than we accomplished the entire time at Solomons, Maryland. In Africa there were beaches on which
the entire Division could be landed. Furthermore, away from home troops are closer to the war atmosphere."\textsuperscript{58} Despite these drawbacks in their training and deployment overseas, the Thunderbirds performed well in Sicily.

The 3d Infantry Division had had minimal exposure to combat in Operation TORCH, where it performed sluggishly. It would enter combat in Sicily under a new commander, Major General Lucian K. Truscott, Jr. Truscott was an exceptional leader and trainer and one of the finest division commanders in the war. He had spent over six years as a student and instructor at the Command and General Staff School at Ft. Leavenworth in the 1930s and was only a major of cavalry when France fell in June 1940. His outstanding abilities carried him to the rank of lieutenant general and command of the 3d Infantry Division, VI Corps, and the Fifth U.S. Army by the end of the war. Truscott was instrumental in the formation of American Ranger battalions in 1942, personally observed the tragic Anglo-Canadian raid on Dieppe, and had commanded a sub-task force under General Patton in Operation TORCH. As a division commander, Truscott would set a high standard for training, planning, and combat leadership.\textsuperscript{59}

Truscott put a high premium on physical conditioning, especially speed marching. The normal rate for infantry marching was two and one-half miles per hour. Truscott felt he could nearly double that figure with proper conditioning. "I had long felt that our standards for marching and
fighting in the infantry were too low," Truscott wrote later, "not up to those of the Roman legions nor countless examples from our own frontier history, nor even to those of Stonewall Jackson's 'Foot Cavalry' of Civil War Fame." The soldiers of the 3d Infantry Division soon dubbed the new marching speed of four miles per hour the "Truscott Trot." The commander of the 3d Battalion, 7th Infantry Regiment during Operation HUSKY, Lieutenant Colonel John A. Heintges, credits good training, thorough rehearsals, and physical conditioning for the Marne Division's success in Sicily. "They [the soldiers] were capable of a hell of a lot more than they thought they were...We practiced the 'Truscott Trot,' and this is why our battalions made such long moves, as much as 34 miles in one day, and fought at the other end, and had a couple of little battles on the way." As a result of the Truscott Trot, the 3d Infantry Division was the most mobile regular infantry division in the Army of the United States.

Truscott was a cavalryman at heart, which influenced the speed at which he conducted operations. In Sicily, the 3d Battalion, 7th Infantry Regiment once scaled a difficult mountain trail reportedly heavily defended by the enemy only to find Truscott standing on a rock at the summit in his brown leather jacket with his white neckerchief fluttering in the wind. His presence was a subtle reminder to the battalion commander that his unit was moving too slowly."
The only serious challenge to the landings of the Seventh U.S. Army in the Gulf of Gela came from a counterattack by the Hermann Goering Panzergrenadier Division and the Italian Livorno Division (Figure 14). In fierce fighting the 1st and 45th Infantry Divisions, the Ranger Force, and elements of Colonel James M. Gavin's 505th Parachute Infantry Regiment held off the enemy attacks with help from tanks of the 2d Armored Division, artillery, and naval gunfire support. The heavy pounding American forces inflicted on the attackers destroyed the Livorno Division as a fighting unit and severely weakened the Hermann Goering Division. Predictably, air power played almost no part in the battle as the air forces decided to place most of their resources into interdiction missions and the system for requesting close air support remained cumbersome at best.

After beating off the German counterattack at Gela, Allied forces began the slow drive north towards the crucial port of Messina in northeastern Sicily. General Bernard L. Montgomery's British Eighth Army conducted the main attack along the direct route up the eastern coast, but the Germans tenaciously defended this obvious avenue of approach and slowed the Eighth Army's attack to a crawl. Lieutenant General George S. Patton's Seventh Army had the mission of defending the Eighth Army's flank, but remaining passive in a flank guard role went against Patton's aggressive nature.
FIGURE 14
COUNTERATTACK OF THE HERMANN GOERING PANZERGRENADIER DIVISION
Sensing an opportunity, Patton ordered his army to conduct a "reconnaissance in force" northwest to seize the port of Palermo.\textsuperscript{65}

While Bradley's II Corps (1st and 45th Infantry Divisions) attacked across the center of the island, a provisional corps under the command of Major General Geoffrey Keyes consisting of the 3d Infantry Division, the 2d Armored Division, the 82d Airborne Division, and Task Force X (two Ranger battalions and the 39th Infantry Regiment of the 9th Infantry Division) drove towards Palermo (Figure 15). The attack began on 19 July and on 22 July American troops entered the city. "It was here that the Truscott Trot really came into its own," claimed General William B. Rosson, then S-3 of the 7th Infantry Regiment. "The troops were in very good condition and they were pushed hard."\textsuperscript{66} As a result, the infantrymen of the 3d Infantry Division advanced a hundred miles in three days and reached Palermo at the same time as the 2d Armored Division with its tanks and half-tracks.\textsuperscript{67}

The seizure of Palermo was a great propaganda victory for Patton and his army, but it would be a meaningless triumph unless it also led to the seizure of Messina, the only really important strategic objective in Sicily. As the Seventh U.S. Army swung east to drive towards Messina, however, Patton's forces met with the same stubborn German delaying efforts that had stalled Montgomery's forces on the
THE SEVENTH ARMY CLEARS WESTERN SICILY
19-23 July 1943

Source: Albert N. Garland and Howard McGaw Smyth, Sicily and the Surrender of Italy (Washington: Office of the Chief of Military History, 1965), Map VII.
Catania Plain south of Mount Etna. Bradley's II Corps faced especially difficult terrain in the mountainous interior of Sicily. Middleton's 45th Infantry Division attacked east along Highway 113, the coastal road leading to Messina, while the 1st Infantry Division fought along Highway 120, the mountainous route to the same objective. Both divisions made only slow headway against the delaying German 15th and 29th Panzergrenadier Divisions (Figure 16).

The 1st Infantry Division fought a particularly bitter battle for the town of Troina on Highway 120 (Figure 17). During most of July the German defenders had delayed from ridgeline to ridgeline in the harsh terrain of northeastern Sicily, causing American forces to deploy to envelop successive defensive positions in time-consuming and costly maneuvers. The delay ended when the German commander in Sicily, General der Panzertruppen Hans Valentin Hube, decided that his forces would defend Troina as the anchor of the entire German defensive line. On 1 August the 39th Infantry Regiment, attached to the 1st Infantry Division, ran into the strong German defenses around Troina. General Allen committed the rest of his division to finish the job. For five days, the division battered itself against the German defenses built into the formidable terrain around Sicily's highest city. On the morning of 6 August, the Big Red One occupied a devastated Troina. The battle was to be the division's last until the morning of 6 June 1944.
FIGURE 16
II CORPS ADVANCE, 24 – 31 JULY 1943

FIGURE 17
THE BATTLE OF TROINA, 1 – 6 AUGUST 1943

Major General Terry de la Mesa Allen's reward for taking Troina was to be relieved of his command.\textsuperscript{71} General Eisenhower and General Patton felt that Allen was tired and needed some time away from combat. Eisenhower decided to relieve Allen (and his assistant division commander, Roosevelt) "without prejudice," so they could rotate back to the United States and assume duties at an equivalent level of command. The conclusion of the battle for Troina was an appropriate time for a change of command, but unfortunately the order affecting Allen's relief came through normal administrative channels instead of personally from Patton or Bradley to Allen. As a result, rumors flew that Allen had been relieved for ineffective command. Nothing could be further from the truth, despite Bradley's lukewarm appraisal of Allen in his memoirs.\textsuperscript{72} There is little doubt that a personality conflict existed between Bradley and Allen, and Allen made no effort to conceal his lack of respect for his corps commander.\textsuperscript{73} Allen would go on to command the 104th Infantry Division with distinction, and prove his worth once again as a combat leader. Roosevelt would invade Normandy as the assistant division commander of the 4th Infantry Division less than a year later, where he earned a Medal of Honor and died of a heart attack.\textsuperscript{74}

After Allen's relief, Major General Clarence R. Huebner assumed command of the 1st Infantry Division, with Brigadier General Willard G. Wyman as his assistant division...
commander. Allen did what he could to make the transition a smooth one. In what must have been a difficult gesture, Allen personally escorted Huebner around the division and introduced him to the regimental and battalion commanders.75

Under Huebner the Big Red One would rise to new levels of combat effectiveness and fight its most impressive battles. He had served with the 1st Infantry Division in every grade from private through colonel and had earned the Distinguished Service Cross with palm, two Purple Hearts, the Croix de Guerre, and a Distinguished Service Medal while serving in its ranks during World War I. Nevertheless, the men of the division treated Huebner as an outsider for many months, in large measure because his command style was so different from Allen's. Huebner was a strict disciplinarian who preferred formality in his relationships with subordinates. Upon his assumption of command, Huebner immediately enforced high standards of discipline and military courtesy. Training events that included marksmanship and close order drill earned the ire of jaded combat veterans, who only slowly learned the value of such activities. Near the end of the war, Huebner observed of the men of the Big Red One: "They respected me; they loved General Allen."76

The 1st and 45th Infantry Divisions began the attack towards Messina; the 3d and 9th Infantry Divisions would
finish it. Truscott's men conducted a series of amphibious envelopments along Sicily's northern coast while the 9th Infantry Division fought through the mountains to the south (Figure 18). After the battle for Troina, the 9th Infantry Division passed through the 1st Infantry Division to continue the attack east. Based upon two excellent tactical terrain studies and intelligence reports, General Eddy decided to repeat the tactics used successfully in the Sedjenane Valley. The 47th Infantry Regiment would pin the Germans from the front, while the 60th Infantry Regiment maneuvered through the mountains around the German northern flank. Once again, the substitution of sweat for blood saved men and gained ground. In a nine day operation, the 9th Infantry Division advanced to Floresta and Randazzo, the last German positions before Messina. There the 3d Infantry Division and the British 78th Division pinched the 9th Infantry Division out of the line.

The terrain was again the biggest obstacle, but the engineers, medics, and quartermaster units overcame severe handicaps to keep the 60th Infantry supplied and on the move. The 60th Infantry had become proficient in infiltrating enemy positions through mountainous terrain. The unit marched one hundred hours, mostly at night, over mountain slopes with minimal supplies, with only the light of a full moon to show the way. The division lost 1,201 men, but again proved that the best way through enemy
FIGURE 18
THE SEIZURE OF MESSINA
positions is to go around them, no matter how difficult the terrain.\textsuperscript{80}

The 3d Infantry Division fought a similar battle against terrain on the coastal road leading to Messina. German demolitions and mines continually blocked the road and in places dropped parts of it off the face of the cliffs along which it ran. When this happened, the 10th Engineer Battalion ended up blasting a new road into the face of the cliffs. When German units contested the road, General Truscott either sent forces inland to envelop the enemy positions or used small battalion task forces in short amphibious turning movements to force the enemy to vacate his positions.\textsuperscript{81} The division also made several night assaults, one of the keys to winning the battle for Sicily.

General Patton's forces won the "race" to Messina by a matter of hours, but the triumphal American entry was meaningless in military terms, for the German forces had already escaped intact across the Straits of Messina into the toe of Italy. Nevertheless, the capture of Sicily on 17 August 1943 opened the Mediterranean shipping lanes to unhindered Allied use and gave the Allies a springboard for further operations in the Mediterranean region. The most important result of the capture of Sicily was the removal of Mussolini's fascist government from power in Italy. Italian troops had done little to hinder Allied offensive operations in Sicily. As one division history stated, "The Italian was
not a good soldier, had no stake in the war, and no interest in continuing to fight it." When given the slightest pretext to do so, Italian soldiers surrendered in droves. Mussolini's successor, Field Marshal Pietro Badoglio, agreed to surrender terms within three weeks after the fall of Sicily, an event that led to the Allied invasion of the Italian mainland and the beginning of a long, difficult campaign to pierce the "soft underbelly" of Hitler's Fortress Europe.

The Sicilian campaign had at least two major impacts on the Army of the United States. First, the campaign allowed American commanders—among them Patton, Bradley, Allen, Truscott, Eddy, Middleton, Major General Hugh J. Gaffey (commander of the 2d Armored Division), and Major General Matthew B. Ridgway (commander of the 82d Airborne Division)—to continue to gain much needed experience in the conduct of battles and campaigns. Second, the campaign provided an opportunity for American divisions to gain further combat experience prior to the cross-Channel invasion in 1944. Four of the divisions used in Sicily—the 1st and 9th Infantry Divisions, the 2d Armored Division, and the 82d Airborne Division—transferred to Great Britain after the conclusion of the Sicilian campaign to participate in OVERLORD. These divisions were among the most effective American units in Normandy. The other two divisions that fought in Sicily—the 3d and 45th Infantry Divisions—
eventually entered the European Theater of Operations through the invasion of southern France in August 1944.

All divisions continued to draw lessons from their experiences, and these lessons became more sophisticated as the units mastered the basics of combat. The 9th Infantry Division learned the need to maintain contact with retreating enemy forces at all costs, to prevent them from reestablishing a coherent defense (a lesson the division would put to good use in the Cotentin Peninsula in June 1944). The 45th Infantry Division felt the best way to keep pressure on the enemy was through the employment of successive night attacks. Infantry units recognized the need to keep troops moving through artillery fire, rather than halting and giving the enemy artillery a fixed target on which to shoot. Once again, artillery proved to be the most effective and deadly weapon in the American ground arsenal. Other lessons dealt with the need for commanders to place themselves forward where they could personally observe the battle, training in mine and booby-trap removal, the use of heavy weapons in infantry battalions, the need for engineers to repair roads and bridges quickly, and the use of pack mules in mountain operations.84

The Sicilian campaign continued to prove the inadequacy of Allied air support of ground operations. Airpower should have been one of the decisive elements of the campaign; instead, the emphasis air commanders put on the independent
mission of interdiction as opposed to close air support limited their role in several decisive battles. Truscott complained that despite repeated requests, the Army Air Forces did not even provide an officer to help plan air support for the amphibious invasion.\textsuperscript{85} As a result, almost no close air support was available to help repel the initial enemy counterattacks on the beaches at Gela. The 1st Infantry Division was also critical of the quality of air support given:

\begin{quote}
During the initial stages of this campaign it was not uncommon to have our own Air Corps bomb or strafe our troops, and in some cases, behind the division command post. Missions calling for close-in bombing of the enemy often brought bombs on our troops.\textsuperscript{86}
\end{quote}

The report concluded, "The morale effect on the American soldier in seeing air that is supporting him in his small battle and the devastating effect it has on the German soldier makes every effort for close coordination of the infantry and air arm a matter of utmost importance."\textsuperscript{87} Not until the division received pilots with radio communications direct to attacking aircraft did close air support improve, but the Army Air Forces never systematized the procedure.

The Allied command did not heed one of the most important lessons learned by the 9th Infantry Division. The movement of the division from North Africa to Sicily went smoothly because the division combat-loaded on transports and put first priority on maintaining unit integrity.
Vehicles carried their full combat loads; the division did not crate any equipment. This allowed for rapid unloading in Palermo, and the division was ready for combat quickly after arrival. Unfortunately, logisticians gained the upper hand in planning the use of shipping space for the Normandy invasion. The result was the sacrifice of unit integrity for maximization of the use of cargo space on the transport vessels. This caused chaos on the beaches, as units searched for men and pieces of equipment for days after arrival. Invasion planners did not heed the lesson that what really matters is not the number of units transported to the beachhead, but the number of combat ready units available to the field commander upon debarkation.

The G-3 Training Section of Allied Force Headquarters compiled a list of lessons learned and published them on 25 October 1943 as "Training Notes from the Sicilian Campaign." The purpose of the document was to provide training lessons for units which had not yet entered combat. Even though Sicily presented a unique set of problems involving mountainous terrain with few roads and an enemy that used extensive mines and demolitions to delay attacking forces, many combat experiences were transferable to other situations. The campaign as a whole validated American ground combat doctrine and lessons learned in Tunisia, especially the vitality of the infantry-artillery team.
Four of the six American divisions that fought in Sicily also fought in Normandy: the 1st and 9th Infantry Divisions, the 2d Armored Division, and the 82d Airborne Division. The other two American divisions that fought on the island—the 3d and 45th Infantry Divisions—would fight in Italy before invading southern France in August 1944. These units brought a wealth of experience to the American forces engaged in the decisive campaigns for France and Germany in 1944 and 1945. The difference in combat effectiveness between these battle-tested units and the remainder of the Army of the United States in the European Theater of Operations would become readily apparent after the Normandy invasion on 6 June 1944. These divisions proved, however, that American combat forces could quickly adapt to the realities of the modern battlefield and match or exceed the capabilities of the enemy forces arrayed against them.

Despite forcing German forces from Sicily, the Allied forces were not successful in destroying large numbers of enemy troops. The Germans skillfully used the rugged Sicilian terrain, mines, demolitions, and booby traps to delay Allied forces:

The Germans proved that in mountainous terrain, contact with an enemy can be broken by the use of mines and demolitions with long range artillery fire covering the minefields and demolitions. Contact was initially broken when a town, which had within it the only road through the area, was completely demolished. Mines were found every five or ten feet, all bridges were
blown and river beds were mined, craters were blown in roads, and mountain slides were dropped on the only existing supply route.90

When German units took up strong defensive positions such as at Troina, the cost of dislodging them was high. Firepower alone could not force the deeply dug-in defenders from their positions. Three German panzergrenadier divisions (after the initial invasion the Italian army was not a factor) managed to delay two Allied armies for over a month in the mountainous terrain of Sicily. The Sicilian campaign should have provided a warning to Allied leaders: the results they could expect from a campaign in Italy would not be commensurate with the effort involved. Nevertheless, buoyed by the Italian surrender and the end of the campaign in Sicily, Allied forces soon plunged into what proved to be anything but the "soft underbelly" of Hitler's Fortress Europe.

2. HQ, 1st Infantry Division, "TORCH Operation, G-3 Report," 24 November 1942, File 301-3, Box 5759, Record Group 407, National Archives, MMRB.


4. 9th Infantry Division, "Standard Operating Procedure," 1941, p. 2, File 309-0.24, Box 7327, Record Group 407, National Archives, MMRB.

5. Combat Team 39, "After Action Report, 7-9 November 1942," 22 November 1942, File 309-INF(39)-0.3, Box 7500, Record Group 407, National Archives, MMRB.

6. Ibid.

7. 26th Field Artillery Battalion, "Report of Operations, 7-10 November 1942," 16 November 1942, File 309-FA(26)-0.3, Box 7456, Record Group 407, National Archives, MMRB.


10. HQ, 47th RCT, "Final Report on Operation of 47CT at SAFI for period 2400Z 7 Nov. '42 to 0730Z 11 Nov. '42," 2 Dec 1942, File 309-IN(47)-0.3, Box 7515, Record Group 407, National Archives, MMRB.

11. HQ, 60th Infantry, "Operations, 8-11 November 1942," 15 November 1942, File 309-INF(60)-3.0, Box 7535, Record Group 407, National Archives, MMRB.

12. Truscott has a good account of this operation, and his problems as the commander, in *Command Missions*, 108-123.

13. HQ, 60th Combat Team, "Comments upon the Operations in the Vicinity of Port Lyautey, Africa," 15 November 1942, File 309-INF(60)-3.0, Box 7535, Record Group 407, National Archives, MMRB.

15. HQ, 1st Infantry Division, "Report after Action against Enemy," 5 December 1942, p. 3, File 301-0.3, Box 5662, Record Group 407, National Archives, MMRB.

16. Ibid., 4.

17. HQ, 1st Infantry Division, "Lessons from Operation TORCH," 25 December 1942, p. 7, File 301-3.01, Box 5771, Record Group 407, National Archives, MMRB.


20. Ibid., 7.

21. See Appendix A.


23. Ibid., 560-62.

24. HQ, 1st Infantry Division, "Report of Operations, 15 January to 8 April, 1945," 17 April 1945, p. 11, File 301-3, Box 5759, Record Group 407, National Archives, MMRB.


27. Ibid.

28. Ibid.

29. Ibid., pp. 10-11. The medics treated cases of combat fatigue with heavy sedation, a practice contrary to modern techniques of treating combat exhaustion. This probably accounts for the low return to duty rate.


32. Ibid.


34. Lieut. Gen. McNair recovered from his wounds, but was killed a little over a year later in Normandy by friendly fire while observing the attack of VII(U.S.) Corps in Operation COBRA.

35. Ibid., 625.

36. Ibid., 632.

37. Ibid., 638.

38. HQ, 9th Infantry Division, "Report of Operations, 11 April - 8 May 1943," 10 September 1943, p. 4, File 309-0.3, Box 7326, Record Group 407, National Archives, MMRB.

39. Ibid., 4-12.

40. Ibid., 12-16.

41. Ibid., 17.

42. Ibid., 18-23.


48. War Department, Lessons from the Tunisian Campaign, 3-16.
49. HQ, 9th Infantry Division, "Report on Combat Experience and Battle Lessons for Training Purposes," 21 June 1943, File 309-0.3, Box 7326, Record Group 407, National Archives, MMRB.

50. War Department, Lessons from the Tunisian Campaign, Section III.


54. HQ, 3d Infantry Division, "Report of Operations, 10-18 July 1943," 10 September 1943, Section I (Training), File 303-0.3, Box 6098, Record Group 407, National Archives, MMRB.


57. HQ, 45th Infantry Division, "Comments and Recommendation, 45th Division, Task Force," 31 July 1943, File 345-0.3.0, Box 10861, Record Group 407, National Archives, MMRB.

58. Ibid.

59. Truscott relates his experiences as a wartime leader in Command Missions, one of the best personal narratives to emerge from World War II.

60. Ibid., 175-76.


64. D'Este, *Bitter Victory*, 304-5.

65. Patton describes the method he used to initiate offensive operations without specific orders as "rock soup." George S. Patton, Jr. *War As I Knew It* (Boston: Houghton Mifflin, 1947), 125.


68. Garland and Smythe, *Sicily and the Surrender of Italy*, 309.


70. HQ, 1st Infantry Division, "Report of Operations, 1 August 1943 to 31 August 1943," 3 September 1943, File 301-3, Box 5759, Record Group 407, National Archives, MMRB.

71. A full accounting of Allen's relief is given by D'Este, *Bitter Victory*, 468-75. The following paragraph is taken from his account.


73. "Terry Allen and the First Division in North Africa and Sicily," undated manuscript located in the Terry de la Mesa Allen Papers, USAMHI, p. 55. Bradley believed that Allen's men lacked discipline under his leadership. This belief stemmed from the conduct of the soldiers of the Big Red One after the Tunisian campaign. While Allen felt his men deserved the opportunity to blow off some steam after their battles, Bradley saw things differently: "The Big Red One literally ran amok along the entire coast of North Africa from Bizerte to Oran. In Algiers, cocky veterans of the fighting hunted down and assaulted the rear area troops, touching off widespread rioting...this incident (and others too numerous and trivial to mention) convinced me that Terry Allen was not fit to command, and I was determined to remove him and Teddy Roosevelt from the division as soon as circumstances on Sicily permitted." Omar N. Bradley and Clay Blair, *A General's Life* (New York: Simon and Schuster, 1983), 172-73.
74. Roosevelt wrote a very poignant letter to the officers and men of the 1st Infantry Division upon his departure. It read in part: "I do not have to tell you what I think of you, for you know. You will always be in my heart. I have been ordered away. It is a great grief to me, and my hope is that sometime I may return, for it is with you that I feel I belong...May luck go with your battle worn colors as glory always has." Letter, Brig. Gen. Theodore Roosevelt to the Officers and Men of the 1st Division, 6 August 1943, File 301-FA(33)-0.1, Box 5898, Record Group 407, National Archives, MMRB.


77. The 9th Infantry Division came over from North Africa to replace the 45th Infantry Division, which withdrew from operations to prepare for the upcoming invasion of the Italian mainland. The 9th Infantry Division was not slated for the Italian campaign. After the end of the Sicilian campaign, the 1st and 9th Infantry Divisions deployed to Great Britain in preparation for OVERLORD.

78. HQ, 9th Infantry Division, "Report of Operations, 5-14 August 1943," 15 August 1943, p. 4, File 309-0.3, Box 7326, National Archives, MMRB.


82. Ibid., 76.

83. Garland and Smythe, Sicily and the Surrender of Italy, 552-53.

84. HQ, 1st Infantry Division, "Report of Operation, 1 August 1943 to 31 August 1943," Section III; HQ, 3d Infantry Division, "Report of Operations, July 19 - Aug 17, 1943," 13 December 1943, File 303-0.3, Box 6099, Record Group 407, National Archives, MMRB; HQ, 9th Infantry Division, "Report of Operations, 5-14 August 1943," Annex 2; HQ, 45th Infantry
Division, "Report of Operation of the 45th Infantry Division in the Sicilian Campaign," 1 September 1943, Section VII, File 345-0.3, Box 10858, Record Group 407, National Archives, MMRB.


86. HQ, 1st Infantry Division, "Report of Operation, 1 August 1943 to 31 August 1943," 21.

87. Ibid.

88. Ibid., Annex 2, p. 5.

89. G-3 Training Section, Allied Force Headquarters, "Training Notes from the Sicilian Campaign," 25 October 1943, File 301-0.4, Box 5665, Record Group 407, National Archives, MMRB.

90. HQ, 1st Infantry Division, "Report of Operation, 1 August 1943 to 31 August 1943," 22.
CHAPTER V
THE LONG ROAD TO GERMANY: THE ITALIAN CAMPAIGN, 1943-1944

The Allied invasion of Italy in September 1943 grew out of the successful seizure of Sicily during the previous two months. The capture of Sicily created a momentum of its own, one that the British hoped to use to expand operations in the Mediterranean. More importantly, the attack on Sicily caused the downfall of Mussolini's fascist government in Italy. The decision by Mussolini's successor, Field Marshal Pietro Badoglio, to agree to surrender terms led to the Allied invasion of the Italian mainland and the beginning of a long, difficult campaign to seize Rome and advance north up the Italian peninsula. For the Allied divisions involved, the Italian campaign was an endless morass of mud, mountains, and frustration. Locked in a seemingly interminable struggle against both the elements and the enemy, American infantry divisions in Italy adapted as best they could to the exigencies of the moment.

The Allies hoped to advance rapidly up the Italian "boot," but the Germans reacted quickly to the Italian collapse and soon had reinforcements in place to take over the defense of the peninsula. Two Allied armies took part
in the invasion of Italy. The British Eighth Army, commanded by General Bernard L. Montgomery, crossed the straits of Messina into the "toe" of Italy on 3 September and moved slowly north up the Calabrian Peninsula. Six days later the Fifth U.S. Army, commanded by Lieutenant General Mark W. Clark, landed in the Gulf of Salerno south of Naples. After an interval of twenty-five years, American forces once again found themselves fighting on the continent of Europe.

The invasion of Salerno, code-named AVALANCHE, was a near-disaster for the Allies. Clark's plan was to land two British divisions and the American 36th Infantry Division, spearheaded by Rangers and Commandos, on opposite sides of the Sele River with a gap of ten miles between them (Figure 19).² The terrain behind the invasion beaches rose rapidly in a line of steep hills that gave the defenders a decided advantage. The redeployment of combat troops to Great Britain in preparation for the Cross-Channel invasion and the lack of assault shipping limited the reinforcements available to Fifth Army.³

While still at sea the Allied soldiers heard the announcement of the surrender of Italy. If the troops thought that the Italian surrender would make the invasion easy, they were sadly mistaken. The German 16th Panzer Division resisted fiercely, although all the Allied divisions managed to claw their way ashore. The next day
FIGURE 19
FIFTH ARMY LANDINGS AT SALERNO, SEPTEMBER 1943
the 45th Infantry Division landed to reinforce the attack. By 12 September, Fifth Army had managed to carve out a beachhead 40 miles long, but only 7 miles deep. As with most military operations, the weakest point was at the boundary; the Allies had still not closed the interval between the British X Corps and the American VI Corps along the Sele River.  

As the Allied troops fought their way inland on 13 September, the Germans launched a massive counterattack with elements of four panzer and panzergrenadier divisions into the gap between the British and American forces (Figure 20). The next forty-eight hours were critical, but hard fighting and quick reinforcements salvaged the Allied cause. The 36th and 45th Infantry Divisions rallied to save their precarious beachheads, but at one point Clark ordered his staff to work on a contingency plan to withdraw VI Corps from south of the Sele River. The commander of the 45th Infantry Division, Major General Troy Middleton, would have none of it. "Put food and ammunition behind the 45th," he scolded Clark. "We are going to stay."  

What the Fifth Army needed was reinforcements. Although General Sir Harold Alexander, commander of the 15th Army Group, rushed the 3d Infantry Division to Salerno as fast as possible by sea, the only real hope for a rapid reinforcement of the beachhead lay with the 82d Airborne Division in Sicily, which could drop at least two regiments
FIGURE 20
THE GERMAN COUNTERATTACK AT
SALERNO, 13 – 14 SEPTEMBER 1943

in by parachute. General Clark sent a note by air to Major
General Matthew B. Ridgway asking him to drop a regiment
that same night. "Can do," was Ridgway's reply.6 The
504th Parachute Infantry Regiment, under the command of
Colonel Reuben Tucker, dropped into the beachhead at
midnight, and by early morning Tucker had reported into
Clark's headquarters. "As soon as assembled you are to be
placed in the front lines," Clark told Tucker. "Sir,"
Tucker replied, "we are assembled and ready now."7

The airborne reinforcement had a greater moral impact
than the physical reinforcement by two battalions would
suggest. The German attack had reached its zenith before
the paratroopers entered the line on the morning of 14
September, but the American troops in the beachhead received
a needed boost at a critical period of the operation. The
next night Colonel James Gavin's 505th Parachute Infantry
Regiment dropped into the beachhead. The balance of the
battle shifted noticeably. With the German counterattack
repulsed and additional units at its disposal, VI Corps
could resume the offensive. On 17 September the Americans
and British closed the gap along the Sele River. The next
day the Germans withdrew.8

The 82d Airborne Division could help save the
beachhead, but not the reputation of the VI Corps commander,
Major General Ernest Dawley. After the battle Clark
relieved Dawley as a sacrificial offering for the
deficiencies of his command, perceived, real, or otherwise. Major General John P. Lucas took command of VI Corps, only to meet the same fate five months later at Anzio.

Ultimately, the Allies succeeded in landing their forces on the Italian mainland and seized the major port of Naples, but the Germans withdrew in good order north to prepared positions in the Winter Line south of Rome.Torrents of rain turned the mountainous terrain into a near-impassable quagmire. Swollen rivers blocked the few valleys that led north into the German positions. Rain washed out bridges and turned roads into rivers of mud. For the Fifth U.S. and British Eighth Armies, a winter of discontent lay ahead.

By mid-November 1943 the combat divisions of the Fifth U.S. Army had been bled white in repeated frontal assaults against the tough German positions. A replacement crisis inevitably arose. The Fifth Army lacked sufficient divisions to rotate units out of the line on a regular basis; instead, personnel managers sent individual replacements up to the front to maintain units at full strength. Unfortunately, Army Ground Forces and the personnel managers in the Mediterranean Theater of Operations had not made sufficient allowances for the large number of infantry casualties that Fifth Army incurred. As a result, AGF stripped some units still in training in the
United States to maintain an adequate replacement flow overseas.10 Within the theater, commanders of replacement depots, under pressure to fill existing shortages of infantrymen, diverted replacement soldiers trained in a wide diversity of skills to infantry units. In October the 1st Battalion, 26th Infantry Regiment received forty replacements to refill a company decimated by losses. The battalion requested riflemen, but received instead: 2 riflemen, 3 basics, 3 dishwashing machine operators, 8 anti-aircraft gunners, 14 truck drivers, 2 radiomen, 1 artilleryman, and 7 other men with miscellaneous skills. One replacement asked, "What do you do with a grenade?"11

The poor replacement situation led General Clark to convene a board of officers in December to look into the problem. The board's findings were an indictment of the replacement system as it existed at the time. Replacements were in poor physical condition, mainly because they had not received proper training once they left their Replacement Training Centers or divisions in the United States. The replacements had spent as much time travelling to Italy (twelve to sixteen weeks) as they had training since entering the Army (thirteen to seventeen weeks). As a result, their skills had eroded. Since training at the replacement depots en route to the theater was poor or nonexistent, replacements entered combat poorly prepared to assume their duties. The quality of these soldiers was not
high. Of the 17,698 replacements received in Italy between 9 September and 6 December 1943, 1.5 percent were Category I, 14.5 percent were Category II, 38.8 percent were Category III, 40.9 percent were Category IV, and 4.3 percent were Category V.\textsuperscript{12}

The 3d, 34th, and 45th Infantry Divisions, heavily committed during the fall, were forced to integrate their replacements into combat units directly at the front. The 36th Infantry Division, in reserve for much of this period, was able to give its replacements a two week course at division before sending them down to their regiments. Replacements integrated at the front suffered a much higher proportion of casualties than veteran soldiers—as much as three times as high.\textsuperscript{13} The board recommended holding replacements in depots in Italy for two weeks for physical conditioning prior to releasing them to divisions. Rather than releasing replacements in large increments to divisions, the board favored a steady flow of small numbers on a daily basis to allow divisions to assign replacements only to units in reserve. Finally, the board recommended attaching combat experienced officers and noncommissioned officers to the replacement depot for two-week periods to improve the training offered there.\textsuperscript{14}

One can hardly overstate the deleterious impact of the personnel situation on the combat divisions. In December 1943 Major General Lucian Truscott ordered the 3d Infantry
Division adjutant general to examine the impact of the replacement situation on the fighting strength of the division. The division entered Italy on 18 September more or less at full strength due to the transfer of 2,000 replacements from the 1st and 9th Infantry Divisions before their departure to Great Britain. After 59 days of consecutive combat the division was relieved from action on 17 November. During this period the division suffered 3,144 battle casualties and 5,446 non-battle casualties, but only received 4,118 replacements and 2,213 returned to duty from hospitals. As a result, the division was short about 2,200 soldiers when it went into reserve to prepare for the Anzio invasion.\textsuperscript{15}

Aggregate numbers told only part of the story. Personnel losses devastated the three infantry regiments. In two months of combat, the infantry regiments lost nearly 70 percent of their strength to battle and non-battle casualties as they sustained 93 percent of the division's total battle casualties. The infantry sustained battle loss rates six times as great as all other divisions elements combined. Non-battle casualties were twice as great in infantry regiments due to their habitual exposure to the elements with little chance to rest, warm up, or dry out. The adjutant general noted that "from the first day of serious combat on 18 September to relief on 17 November, the trend of this [the division's] effective strength curve is
Casualties were particularly high among junior leaders, which caused "a gradual reduction in combat efficiency due to the loss of experienced leaders and a lack of opportunity to train and indoctrinate new leaders." The adjutant general concluded:

Infantry combat requires great exertion, is subject to greater risk, and imposes greater hardship than any other branch. Certainly no combat imposes greater mental and physical strain on individuals than does infantry combat. Infantry, therefore, requires the highest physical standards and replacements must be in the highest degree of physical condition.

As discussed in Chapter II, however, the Army's personnel policies effectively reversed the priorities called for by this report.

General Truscott made some basic, sensible recommendations when he signed the report. He recommended the organization of replacement pools based on actual loss rates by specialty and grade, maintenance of replacement battalions closer to supported divisions, better training of replacements under combat experienced leaders, automatic supply of small numbers of replacements to committed divisions on a regular basis, return of recovered soldiers from hospitals back to the units from which they came, greater pay for soldiers exposed to greater hazards, and a distinctive insignia for combat infantrymen. In time, the Army would act on some of these suggestions, such as the creation of the Combat Infantry Badge as a distinctive insignia for infantrymen who had engaged in combat. Other
problems, such as ensuring that soldiers recovered from wounds returned to their own units, the Army never did solve.

In addition to manpower problems, combat divisions in Fifth Army had difficulties with supply and transportation. Moving supplies forward required a herculean effort. In one month alone the 45th Infantry Division had four of its bridges over the Volturno River wash out.\textsuperscript{20} Vehicle losses from constant use in the difficult driving conditions were high. Trails and narrow passes required innovative methods of supply, such as the use of pack mules, dubbed the "3d Division Cavalry" by Truscott's men.\textsuperscript{21} When all else failed, soldiers hand-carried supplies forward.

As Allied forces tried to penetrate the various belts of the Winter Line, operations degenerated into actions by regiments and battalions to run the ridges and seize high ground for observation. The problem with combat in Italy was there was too much key terrain for an attacker to seize. If the Allies forced the Germans off of one ridge or mountain, the Germans simply moved back to the next one and the process started over. The German commander in Italy, Luftwaffe Field Marshal Albert Kesselring, who had spent most of his career as an artillery officer, understood the nature of defensive warfare in the mountains of Italy. He was determined to hold the Allies south of Rome.\textsuperscript{22}
By mid-December the Allies came up against the toughest part of the German defenses, the Gustav Line anchored on the town of Cassino and the Rapido River at the southern end of the Liri Valley (Figure 21). Under pressure from Prime Minister Winston Churchill to seize Rome, Field Marshal Sir Harold Alexander and General Dwight Eisenhower planned an amphibious turning movement around the Gustav Line at Anzio, a small port south of Rome. Alexander gave the mission of planning and executing Operation SHINGLE to Clark and the Fifth U.S. Army. Due to lack of landing craft, only two divisions of VI Corps could participate in the initial landing. Churchill and Alexander assumed that a two-division landing would be enough to force the Germans either to weaken the Gustav Line to the point where Fifth Army could penetrate it or withdraw their forces altogether to confront VI Corps in their rear. Kesselring had other ideas.

As a prelude to the invasion of Anzio, General Clark ordered the 36th Infantry Division to attempt an assault crossing across the Rapido River and into the Liri Valley on 20 January 1944 (Figure 22). The purpose of the assault was to draw German reinforcements to the Cassino front and enable the invasion forces to establish their beachhead at Anzio with less resistance. A successful assault might even allow the Fifth Army to penetrate the Gustav Line and link-up with VI Corps at Anzio. One could hardly conceive of
FIGURE 21
THE GUSTAV LINE
FIGURE 22
THE 36TH INFANTRY DIVISION ASSAULT ACROSS THE RAPIDO RIVER, 20-22 JANUARY 1944
a more difficult mission and a more challenging piece of terrain upon which to execute it. Fall and winter rains gorged the fifty-foot wide river with water flowing at ten mile per hour. The Germans had diverted water to flood the approaches to the river bank, then liberally sowed both sides with mines. The veteran 15th Panzergrenadier Division defended the sector of the river at the mouth of the Liri Valley.26

The 36th Infantry Division was not in great shape to tackle the task ahead of it. In December 1943 the division had taken over three thousand battle and non-battle casualties in the grueling battle of San Pietro. The division needed time to rest and integrate and train replacements to fill its depleted ranks. The division commander, Major General Fred L. Walker, was hardly enthusiastic about his mission.27 The biggest problem, however, was the poor staff work and planning behind the operation, which failed to synchronize the various arms involved in the crossing and left the Texas Division short of fire support at critical moments in the battle.

The plan entailed a night assault crossing by the 141st and 143d Infantry Regiments north and south of San Angelo, to establish a bridgehead through which the 1st Armored Division would pass to continue the assault. Engineers would have to clear paths to the river bank in darkness, since German guns dominated the approaches to the river.
The engineers would mark paths clear of mines with white tape, but no one questioned how the troops would see this tape at night. Other engineers would handle the boats used in the crossing. Troops would have to negotiate over a mile of open, muddy swamp with their heavy loads just to get to the river. Once across, strong German fortifications and mined ground awaited them.\(^{28}\)

When the assault commenced at 2000 hours on 20 January 1944, almost everything that could go wrong did. Engineers guiding the assault troops got lost and led units into unmarked minefields. German artillery and mortar fire caused numerous casualties and delays as the assault troops moved across the open ground to the river. Engineers and infantrymen who had never worked together before failed to coordinate their efforts effectively. Terror and confusion reigned supreme at the river. By daylight the division had established only two foot bridges across the Rapido, and had to abandon these bridges almost immediately due to the accurate German artillery fire which blanketed them. Portions of two battalions made the crossing to the west bank of the river, but the 143d Infantry Regiment withdrew its forces before the enemy annihilated them completely. This withdrawal left scattered elements of one infantry battalion in the 141st Infantry Regiment across the Rapido by 1000 hours on 21 January.\(^{29}\)
The next night the 141st Infantry Regiment attempted to reinforce its precarious bridgehead with its other two battalions, while the 143d Infantry Regiment attempted to cross the river again. The failure to complete a vehicular bridge across the river, however, doomed the infantrymen on the far side. The inability of division and corps artillery to silence the enemy guns also contributed to the failure of the attack. After beating off several enemy counterattacks and enduring heavy enemy artillery, mortar, and machine gun fire, the men of the 36th Infantry Division on the west side of the Rapido finally collapsed on the night of 22 January. They were victims of a poor plan badly executed. The division suffered over two thousand casualties in the two day attack. Its combat effectiveness was so poor at the end of January that the intelligence officer of the 143d Infantry Regiment concluded sarcastically, "The Germans can hold and occupy their present positions or they can withdraw or they can occupy our positions." In the next few months, however, the 36th Infantry Division showed the resiliency of the American infantry division in World War II. By the time of the breakout from the Anzio beachhead four months after the Rapido fiasco, the Texas Division had fully reconstituted and was ready to play a key role in the attack on Rome.

The failure of the 36th Infantry Division to cross the Rapido meant that VI Corps at Anzio could expect little
immediate reinforcement from Fifth Army. This caused no little consternation, since preparations for Operation SHINGLE did not go well. The rehearsal for the landing, code-named WEBFOOT, between 13-18 January 1944 was a disaster. None of the infantry battalions in the exercise landed on time, in formation, or on the correct beach. No anti-tank guns, artillery, tanks, or other heavy weapons were in position ashore by daylight. Ship-to-shore communications were poor or nonexistent. The Navy launched the landing craft so far from shore that the 3d Infantry Division lost an entire battalion's worth of artillery along with signal and other equipment. "We had the damnedest foul-up in that thing I've ever seen any time," one participant recalled. General Truscott concluded, "No military force can hope to assault a defended beach with prospects of success unless it can be landed on shore in tactical order and proper condition to engage in combat. Exercise just concluded this date disclosed so many deficiencies in these respects that the need for additional Naval training and improved organization is perfectly obvious." Clark was unwilling to delay the invasion of Anzio. Truscott yielded.

Despite the poor rehearsal, nearly everything went right on the day of the actual invasion. The soldiers of VI Corps achieved complete surprise when they waded ashore at Anzio on 22 January 1944. Landings by the U.S. 3d Infantry
Division, British 1st Infantry Division, 504th Parachute Infantry Regiment, and Commandos and Rangers were virtually unopposed; by nightfall on 22 January the Allies had landed over 36,000 troops and 3,000 vehicles with negligible losses. The corps commander, Major General John P. Lucas, was determined to build a solid defensive line before proceeding further towards the Alban Hills, however. By the time Lucas was ready to exploit off the beachhead, Field Marshal Kesselring had elements of ten divisions either at Anzio or on the way there. The Allied attack to reach Campoleone and Cisterna in late January failed; the Germans completely eliminated two Ranger battalions as they attempted to infiltrate enemy positions along the Pantano Ditch. Recriminations flew. Prime Minister Churchill stated, "Instead of hurling a wild cat on to the shore all we got was a stranded whale and Suvla Bay over again." Lucas mused, "This whole affair had a strong odour of Gallipoli and apparently the same amateur was still on the coach's bench."

The Allied beachhead was now clearly in trouble. Kesselring assembled a massive force and counterattacked in early February (Figure 23). His forces held the advantage of holding the key terrain surrounding the Allied positions. From the dominant hills overlooking Anzio, German artillery could pound Allied units. The combination of the Italian winter, heavy artillery fire, and static positions made
FIGURE 23
THE GERMAN COUNTERATTACK AT ANZIO, FEBRUARY 1944
Anzio resemble the Western Front of World War I more closely than any other battle in World War II. General Clark had little other choice than to reinforce the beachhead to prevent a complete collapse. Before long the American 45th Infantry Division (now under the command of Major General William W. Eagles, formerly the assistant division commander of the 3d Infantry Division), the Canadian-American First Special Service Force, and the British 56th Infantry Division deployed to Anzio. By the time of the breakout from the beachhead in May, VI Corps numbered six infantry divisions and one armored division. Had this force been available when the Allies launched SHINGLE, there is little doubt that VI Corps could have achieved the great things expected of it. Instead, the Allies at Anzio had to fight for their lives in one of the most miserable, disheartening battles of the war.

Three things saved the Allies from disaster. First, the British and American infantry at Anzio displayed a high capacity to endure in even the toughest of conditions. Second, Allied artillery, despite suffering from the disadvantage of being positioned on lower ground, soon gained the upper hand over the German gunners. Third, the outstanding leadership of General Truscott imbued the VI Corps with a will to win. The ultimate victory at Anzio was his greatest achievement.
Truscott took command of VI Corps on 23 February at the conclusion of the largest German attack to collapse the beachhead. He brought the same lead-from-the-front style of leadership with him to VI Corps that he had used as commander of the 3d Infantry Division. VI Corps headquarters had located itself in tunnels beneath ground. Truscott established his command post above ground to share the perils of enemy fire with his soldiers. The corps staff was not confident in planning or directing operations. Truscott eliminated the debating society atmosphere and replaced it with firm, military decision-making procedure. Lucas had alienated the British commanders and staff officers at Anzio. Truscott, used to working with the British since his assignment with Admiral Lord Louis Mountbatten's Combined Operations Headquarters in Great Britain in 1942, mended fences. Fifth Army had numerous combat service support assets at Anzio and morale in many of these organizations was low. Truscott brought them under effective supervision. Most importantly, Truscott reorganized the VI Corps fire support assets—primarily its heavy artillery—to mass fires on any endangered point in the beachhead. "The beachhead had come close to disaster," Truscott later wrote. "Unnecessarily so, since we had demonstrated that we had sufficient means to stop the German offensive much earlier had we adequately organized, properly coordinated, and effectively employed our resources."38
Artillery was the greatest asset the Allies had at Anzio; indeed, artillery was the greatest asset the American army had in World War II. The creation of the infantry-artillery team in the Army of the United States was an outgrowth of the battles of attrition on the Western Front in World War I, coupled with technical improvements made during the interwar period. The battles of Cantigny, the Second Battle of the Marne, St. Mihiel, and the Meuse-Argonne campaign proved to American officers that infantry needed massive fire support to succeed on the modern battlefield. The problem with artillery in World War I, however, was its lack of flexibility. Due to lack of adequate communications, most fires were pre-planned. Though massive, artillery barrages were mostly hit-or-miss affairs, since artillerymen lacked the means to adjust fires rapidly. Artillery pieces also lacked the mobility to move forward quickly when they needed to displace to keep up with the attack.39

Three developments in the interwar period solved these problems. The first was the creation of centralized fire direction centers, which could synchronize fires from numerous artillery battalions onto a single target at the same time. The second was the emergence of forward observation teams equipped with radios. Forward observers could call fire missions on targets as they appeared on the battlefield, which eliminated much of the elaborate planned
fires used previously. Light aviation observation squadrons, mounted in Piper Cub aircraft, took this development one step further as they flew over the battlefield and called in fires on targets of opportunity. The third development was the manufacture of guns with split trails capable of being towed by motor vehicles and other artillery pieces that were completely self-propelled. As a result, American artillery entered World War II with the most advanced fire control system in the world and the mobility to keep pace with motorized and mechanized forces. 40

At Anzio, VI Corps did not use its artillery to full effect until Truscott took command. "General Truscott realized the capabilities and limitations of his artillery," stated Lieutenant Colonel Harry Lemley, S-3 of the 18th Field Artillery Brigade at Anzio, which Truscott made into his corps artillery. "He was demanding of it." 41 When Truscott arrived at VI Corps, he found the artillery poorly coordinated. He called on Major Walter T. Kerwin, S-3 of the 3d Infantry Division Artillery, to fix the system. Truscott ordered Kerwin to accompany the Corps Artillery Officer, Brigadier General Baehr, on a mission to organize the corps artillery fires as he had done in the 3d Infantry Division. 42 What Major Kerwin did was to centralize fire direction in the beachhead to enable VI Corps to mass its fires. Soon the corps was able to mass all of its fires—
over 1,000 tubes counting tanks and anti-aircraft guns--at any given moment on any single target in the beachhead. The technique is known as time-on-target, or TOT. The fire direction center would compute data for each gun so that the shells landed on the target at the same instant. The effect was nothing less than devastating.

The new artillery fire control system received its first major test on the morning of 29 February. The previous evening VI Corps received intelligence that the Germans were preparing another attack for early the next day. General Truscott ordered a massive artillery counter-preparation for 0430 hours by all guns in the beachhead. "We would have every gun in the beachhead pound these troop assembly areas, reserve positions, artillery locations, and tank concentrations for a full hour before they could begin their attack," Truscott wrote later. "It was possible, I thought, we might completely disrupt the German strategy." The artillerymen worked hard to pull the mission off. "I'd really never done anything quite like that before, but I was able to pull things together because by this time we had a single artillery headquarters integrated with the corps headquarters and as a result, a much better feel for the situation and much better control over our units and a much better coordination with the divisions," Lieutenant Colonel Lemley stated later. The tactic worked; the German assault barely made a dent in
Allied lines. The Allies destroyed half the German tanks in the attack and took over 1,000 prisoners.46

TOT artillery fire also silenced the German artillery overlooking Anzio. The Germans had the advantage of position and range, but their fire control technique lacked the sophistication of the Allied system. "I don't believe the Germans knew how to [mass fires]," Lemley stated. "In fact, I'm sure that's true because after the war, I took it upon myself to interrogate a number of German artillery generals and their concepts at the end of the war were not much further than mine when I started out."47 As a result, German commanders relied on the ability of their infantry and tank units to break through Allied lines with superior tactics. Hitler sent his elite Parachute Demonstration Battalion to Anzio; accurate artillery fire destroyed half the battalion in its first assault.48 A similar fate befell the vaunted Infantry Lehr Regiment, an infantry demonstration regiment rushed from Germany to participate in the battle.49 A simple comparison of artillery expenditures in the 45th Infantry Division shows the magnitude of the effort. During four months in combat on the Fifth Army front in Italy, the Thunderbirds fired 167,153 rounds. At Anzio during the single month of February 1944, the division fired 129,732 rounds.50 Not for the first nor the last time in the war, German attempts to maneuver foundered due to Allied firepower. The
beachhead at Anzio held.

For the next eleven weeks, Allied and German forces maintained a precarious stalemate at Anzio while Fifth Army prepared an offensive to penetrate the Gustav Line, break out of the beachhead at Anzio, and seize Rome (Figure 24). Activity in the beachhead was confined to patrolling, small raids, and artillery and mortar fire. General Truscott rotated his divisions out of the line for short periods of rest, re-equipping, and training.\(^{51}\) "To men confined to fox-holes by day and limited movement at night," the 30th Infantry Regiment reported, "a 48 hour rest period improved morale immeasurably."\(^{52}\)

The divisions badly needed the break. During the period from 22 January to 28 March 1944, the 3d Infantry Division suffered 5,475 battle and 5,441 non-battle casualties, over two-thirds of its authorized strength.\(^{53}\) In sixty-six days of combat, the division lost 116 percent of its riflemen, over 70 percent to the effects of enemy artillery fire.\(^{54}\) Major General John W. "Iron Mike" O'Daniel, who took over the Rock of the Marne Division from Truscott, reported, "The battle and non-battle loss rates at Anzio, if continued, is [sic] equivalent to the replacement of an entire division with new troops and hospital returnees every 94 days and of the infantry regiments alone every 74 days. Judging by the casualty statistics of the Anzio operation and the first phase [of the Italian campaign],
FIGURE 24
STALEMATE IN ITALY, SPRING 1944
over 90 percent of battle casualties will be infantry and future replacement requirements should be weighted accordingly." In short, infantry divisions could enter combat at full strength and with well-trained personnel, but could not maintain a higher state of training than the standard held by the replacement stream. In Italy, the replacement system could not react fast enough to the demands placed upon it. Army Ground Forces responded by continuing to strip divisions still in training.

Reinforcements arrived in both VI Corps and Fifth Army in preparation for the spring offensive, code-named DIADEM. The American 34th Infantry Division, 36th Infantry Division, and 1st Armored Division arrived at Anzio to give VI Corps the ability to resume offensive operations. To take their place on the Fifth Army front, the first organized reserve ("draftee") divisions arrived in Italy. The 85th and 88th Infantry Divisions were activated in May and July 1942, respectively. After more than a year of training in the United States, the divisions deployed to North Africa in late 1943 and to Italy in early 1944. Although they assumed defensive positions on the Fifth Army front in March 1944, DIADEM would be their first taste of offensive combat. Their performance would validate the method used to raise and train new combat divisions in the wake of Pearl Harbor. Fittingly, General Clark would see his system of building new divisions tested for the first time in the army
under his command.

The 88th Infantry Division was one of the more fortunate of the new draftee divisions in the Army of the United States. Its commander, Major General John E. Sloan, was a 1910 graduate of the United States Naval Academy who had transferred to the Coast Artillery in 1911 and then the Field Artillery during World War I. Although he did not get overseas during that war, Sloan had extensive troop leading experience during the interwar period, and attended the Command and General Staff School in 1926 and the Army War College in 1932. He also taught extensively, first as a ROTC professor at Texas A&M, next as an instructor at Ft. Leavenworth, then during a tour as professor of military science and tactics at Oregon State College. Like General George C. Marshall, Sloan organized and commanded a Civilian Conservation Corps camp. Everything about Sloan’s career suggested he would do well in raising and training a new unit composed primarily of untrained draftees. Like many other officers in his generation, nothing in his career pointed to how he would perform in combat. In Italy Sloan would prove his competence as a division commander.

The 88th Infantry Division received a quality cadre from the 9th Infantry Division and its fair share of the draftee pie. What allowed the division to coalesce was the stability of its personnel. It escaped large drafts for officer candidate schools, the Army Service Training
Program, or to provide replacements for overseas units. As a result, the training program progressed smoothly and within sixteen months the 88th Infantry Division had embarked for overseas, a record exceeded by only one other division in World War II. When the division occupied a sector of the II Corps front near Minturno on 4 March 1944, it was as well prepared as any draftee division would be to assume its duties in combat. Both the 85th and 88th Infantry Divisions used the lull of the next two months to season their troops and prepare for the upcoming offensive.

The experienced divisions in VI Corps also used the relative lull in combat to train for offensive operations. The 3d Infantry Division in particular reached a peak of efficiency under its new commander, General O'Daniel. "He was just like Truscott, and Truscott was just like Patton," stated John A. Heintges, executive officer of the 30th Infantry Regiment at Anzio. "You know, move, move, move, move." O'Daniel, nicknamed "Iron Mike" because of his booming voice, exuded confidence and professionalism. "They [Truscott and O'Daniel] were hard men to please and let you know in no uncertain terms when you were not performing to their standards, but they were a pleasure to serve under," Heintges recalled. The training program under O'Daniel hardly missed a beat.

The training in the 30th Infantry Regiment gives some indication of the level of expertise reached by the 3d
Infantry Division during this period. For three weeks prior to the execution of Operation BUFFALO, the breakout from Anzio, the regiment conducted intensive training in the beachhead. The regiment indoctrinated replacements and corrected deficiencies noted during the previous combat period. "There still exists a lack of training in basic leadership among junior officers and NCO's," the regiment noted in its after-action report. "The present soldier [a draftee replacement] must be led. Older officers and NCO's must closely supervise, control and train the new replacements. This process is continuous and must be done even in battle." Individuals and teams went through live fire exercises with all of their weapons. The regimental staff made plans, issued orders, developed mock-ups of the attack zone, and conducted rehearsals.

The regiment also placed stress on coordinated tank-infantry training, something most new divisions neglected until bitter experience proved its necessity. "In a fast moving attack and pursuit in which Infantry, Tanks and TD's are working in teams, wire communication is not practicable because of damage to wire by armored vehicles. Radio and officer liaison were found to be the most effective means of control, but even they were not entirely satisfactory," the regiment noted. "Much thought must be given to the solution of this problem." The 7th Infantry Regiment echoed the concern of its sister regiment: "It was found that a
definite means of communication, possibly SCR 300 radio, between tanks and infantry, down to include the rifle platoon working with the tanks, is essential."\textsuperscript{64}

Unfortunately, the Army gave almost no further thought to the problem of infantry-tank coordination until near-disaster in Normandy forced divisions there to improvise improved means of communication. The experience was just one more indication that in World War II, the Army of the United States either adapted itself to combat at the division level or it failed to adapt at all.

DIADEM began on 11 May 1944. The first three days of the battle were a bitter slugfest for II Corps. Neither the 85th nor the 88th Infantry Divisions fully achieved its objectives on the first day of the attack, but the German defenders suffered irreplaceable losses. The 85th and 88th Infantry Divisions fought well for new divisions, but sustained hundreds of casualties. One battalion S-3 in the 88th Infantry Division lamented of his units' losses: "Two years of training [have] gone up in smoke."\textsuperscript{65} What the major could not see was the resiliency of the replacement system behind his battalion. The two infantry divisions in II Corps began DIADEM with an overstrength in personnel. The excess men formed replacement detachments at division level. These soldiers trained with their divisions prior to the commencement of the offensive, and thus were easily integrated into their units during the attack. As a result,
the two divisions were able to attack again on 13 May with nearly the same strength as they had on 11 May.66

As a result of the breakthrough of the French Expeditionary Corps (FEC) to the northeast of II Corps and the pressure exerted by the 85th and 88th Infantry Divisions, the German defense in front of II Corps soon crumbled (Figure 25). By the morning of 16 May, both the French and the Americans had broken the Gustav Line in their zones. While the FEC assisted the British Eighth Army by enveloping the Hitler Line, II Corps advanced north towards link-up with VI Corps at Anzio. The 85th and 88th Infantry Divisions had suffered over 3,000 casualties in six days of battle, but they had helped to break the back of German resistance along the Gustav Line.67

Along the way, they had proved that the new American "draftee divisions" could perform well in combat. The historian of the 88th Infantry Division writes:

It [the 88th Infantry Division] would fight as well in other battles--on the Arno, in the Apennines, along the Po, and through the Alps. It would fight, take losses, lose its edge, rest, retrain, and fight again in a cycle that continued until the end of the war. All of these later battles and cycles were of great importance. It was the events of May and June, however, that were particularly held by the nation's leadership, the War Department, the newspapers, and the draftees themselves to have proved the mettle of the draftee division. The toughness of the 88th Infantry Division was no longer a question.68

One cannot overestimate the boost that the success of Operation DIADEM gave to the confidence of the Army of the
FIGURE 25
COLLAPSE OF THE GUSTAV LINE

TYRRHENIAN SEA

GULF OF GAETA

FRONT LINE
(14 MAY)
United States. The entry of the draftee divisions into combat came approximately four weeks before the cross-Channel invasion of France. Other new divisions would be tested in the hedgerows of Normandy, as the 85th and 88th Infantry Divisions had been tested in the mountains of Italy. Upon the outcome of their struggles to succeed would rest the fate of the free world.

On 23 May VI Corps launched Operation BUFFALO and joined in the Allied offensive to shatter German defenses in southern Italy and take Rome (Figure 26). The brunt of the assault fell to O'Daniels' 3d Infantry Division and Major General Ernest N. Harmon's 1st Armored Division. At 0545 hours the beachhead shook as the VI Corps artillery pounded German positions in front of Cisterna, the town that had eluded the grasp of the Rangers and the Marne Division in their ill-fated attack four months earlier. Enemy positions were heavily fortified and mines were thickly sown on all avenues of approach. At 0630 hours the infantry attacked and ran into strong opposition from the entrenched enemy. Cisterna was the key to enemy defenses at Anzio, and the Germans knew it. They therefore defended the town tenaciously.69

After three days of vicious fighting which included one of the few documented bayonet assaults by American troops in World War II, the 3d Infantry Division seized the shell that had once been Cisterna in house-to-house fighting. Along
FIGURE 26
BREAKOUT FROM ANZIO

Source: Ernest F. Fisher, Jr. Cassino to the Alps (Washington: Center of Military History, 1977), Map V.
the way four of the division's soldiers earned the Medal of Honor, two posthumously. The 3d Infantry Division suffered 1,400 killed and wounded. The Germans had suffered much worse. The attack by the 3d Infantry Division, 1st Armored Division, and the 1st Special Service Force destroyed the German 362d Infantry Division and severely damaged the 715th Infantry Division. The loss of Cisterna and Cori opened the way to Valmontone and the line-of-communication of the German Tenth Army, still fighting in the Gustav and Hitler Lines to the south. General Truscott now pointed the spearhead of VI Corps towards this terrain feature, the jugular vein of the German army in Italy.

At this point in the battle, Clark intervened to order Truscott to change the direction of his attack. Clark was concerned that the British would seize the glittering prize of Rome while American units were tied up in the Valmontone Gap. He therefore ordered Truscott to proceed directly north to the Eternal City. "Such was the order that turned the main effort of the beachhead forces from the Valmontone Gap and prevented the destruction of the German X Army," sighed Truscott. Clark's change of mission necessitated extensive shifts among the units in the beachhead. The 3d Infantry Division attacked towards Valmontone alone, while the 34th, 36th, and 45th Infantry Divisions attempted to penetrate the still-formidable German defensive positions in the Alban Hills (Figure 27). The 1st Armored Division had
TO ROME

TYRRHENIAN SEA

NETTUNO

ANZIO

ELEVATIONS IN METERS
0 400 500 600 700 800

FIGURE 27
SHIFTING THE ATTACK, 25-26 MAY 1944
to retrace its steps to prepare to exploit any penetration to the north. "Considering the congested area and restricted road net available for these preparations, a more complicated plan would be difficult to conceive," wrote Truscott. He added, "It was practicable only because staff preparation was thorough and complete and it was carried out by well trained, and disciplined troops; and because enemy capabilities for interference were limited."74

To his credit, Truscott expressed public enthusiasm for Clark's plan even while seething privately. He would obey Clark's orders and he expected his division commanders to do the same.75 The new plan called for the 34th and 45th Infantry Divisions to attack on a narrow front to penetrate German positions in the Caesar Line. As Truscott expected, the German defenses in this area were too strong for the two divisions to penetrate them quickly. After two days of fighting, VI Corps was still short of its immediate objectives and had not broken the enemy line.76 Nevertheless, Truscott committed the 1st Armored Division to the attack on 29 May. It, too, failed to penetrate the German defenses.

The unit that would break the stalemate, ironically, was the same division that had received one of the worst defeats in the Italian campaign during the abortive attack across the Rapido River back in January. The 36th Infantry Division had discovered a two-mile gap between the I
Parachute Corps and the LXXVI Panzer Corps along the slopes of Monte Artemisio on 27 May. General Walker proposed to penetrate the gap with his division, and Truscott agreed to the plan. In a night assault beginning at 2300 hours on 30 May, two regiments of the Texas Division quickly scaled the heights of Monte Artemisio and took them without firing a shot (Figure 28). Forward observers on the heights had a field day shooting at the lucrative targets that opened up below them. The attack by the 36th Infantry Division effectively enveloped the German positions along the Caesar Line south of Rome and made possible a renewed effort by the 34th and 45th Infantry Divisions and the 1st Armored Division. The division previously considered to be the worst in Fifth Army now proved that it had learned a great deal during its previous battles. For the Texas Division, Monte Artemisio was not just a battle—it was justice.

The 36th Infantry Division's exploitation of the Monte Artemisio gap into the Alban Hills caused the German defenses south of Rome to crumble. As the Germans began to withdraw, General Clark brought II Corps abreast of VI Corps for the final drive on Rome. Divisions from both corps entered the Eternal City on 4 June, two days before the long-awaited commencement of Operation OVERLORD, the cross-Channel invasion of France. A week later, the VI Corps headquarters and the 3d, 36th, and 45th Infantry Divisions dropped out of the pursuit of German forces in Italy to
STRATAGEM ON MONTE ARTEMISIO
30 May - 1 June 1944

Approximate front, 30 May
Approximate front, 1 Jun
Axis of advance, date indicated
Movement to front, night, 30 May

Contour interval in meters

FIGURE 28
THE 36TH INFANTRY DIVISION SEIZES MONTE ARTEMISIO, 30 MAY - 1 JUNE 1944

begin training and preparations for an invasion of southern France. For over a year the Italian campaign had been the major project for British and American ground combat forces. With Rome captured, the campaign would become a sideshow to more significant events elsewhere.

The Army of the United States suffered greatly in Italy, but had much to be proud of as well. The infantry divisions of the Fifth U.S. Army adapted themselves to combat against a skilled enemy in some of the most rugged terrain in the world. The American logistical system proved it could keep pace with the demands of modern combat, even if the end of the logistical pipeline proved to be a pack train of mules. The Allied intelligence system, firmly based on ULTRA code-breaking efforts and air reconnaissance, demonstrated its effectiveness during operation after operation. American artillery proved its technical superiority in the Anzio beachhead and beyond. Finally, American divisions proved themselves to be flexible, resilient, and capable of functioning at a high level even during their initial entry into combat.

Other facets of the American performance in Italy deserve more criticism. Senior American leadership, with certain exceptions like General Truscott, often proved incapable of exploiting opportunities as they arose. Air-ground coordination was abysmal. Finally, the personnel system of the Army of the United States was proving
inadequate to the demands of the World War II battlefield. Although American senior leadership was gradually seasoned in battle and air-ground cooperation improved, the Army of the United States was burdened to the end of the war with a replacement system it could never fix. As with so many other problems faced by the American army in World War II, what remained was for division commanders to improvise solutions to the replacement problem. Their solutions would be sorely tested in the campaign for France and Germany in 1944 and 1945.
ENDNOTES


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38. Truscott, Command Missions, 328; for Truscott's reforms in VI Corps, see pp. 329-340.


41. Lemley, Oral History, Section II: 52.

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43. Lemley, Oral History, Section II: 54.

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45. Lemley, Oral History, Section II: 44.

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51. Bowditch, Anzio Beachhead, 105.

52. HQ, 30th Infantry Regiment, "Report of Operations, 1-31 March 1944, p. 6, File 303-0.3, Box 6102, Record Group 407, National Archives, MMRB.

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54. Ibid., 3.

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58. Ibid., 31.

59. Ibid., 12.


61. Ibid., 416.


63. Ibid.

64. HQ, 7th Infantry Regiment, "Report of Operations, 1-30 June 1944," 4 July 1944, File 303-0.3, Box 6105, Record Group 407, National Archives, MMRB.


66. Ibid., 66.

67. Ibid., 77.

68. Brown, *Draftee Division*, 139.


70. Ibid., 157-171.

71. Ibid., 171.

72. For an excellent discussion of Lieut. Gen. Clark's motives in shifting the axis of the VI Corps attack, see D'Este, *Fatal Decision*, 366-73.

73. Truscott, *Command Missions*, 375.

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75. Fisher, *Cassino to the Alps*, 165.
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CHAPTER VI
NORMANDY: GRADUATE SCHOOL IN THE HEDGEROWS

Since the beginning of active American involvement in World War II in December 1941, General George C. Marshall had pushed hard to get the Allies to agree to a Cross-Channel invasion of France. The British preferred a strategy of peripheral operations in the Mediterranean and a Combined Bomber Offensive that attacked Germany directly from the air. Behind these strategies lay a long history that distinctly separated the British and American approaches to war. In the 19th century the British defeated Napoleon through a blockade of the European Continent, monetary support of Continental allies, and a peripheral campaign in the Iberian Peninsula. During World War I the British rejected this approach, committed a large army to the battles of attrition in France, and lost the flower of British manhood in bloody trench warfare. Battles such as Ypres and Passchendaele seared the memories of Prime Minister Winston Churchill and his military advisors. Their proposals for the invasions of North Africa, Sicily, Italy, the Balkans, and even Norway reflected their reluctance to put the British army into position to fight a decisive, but
undoubtedly costly, campaign against the German army.

   History had cast the American army in a different mold. During the climactic struggle of the American Civil War in 1864 and 1865, the Commanding General of the Union army, Ulysses S. Grant, launched his forces directly at the Confederate armies of Northern Virginia and Tennessee. His strategy of attrition resulted in both huge casualties and decisive victory. In World War I, the American Expeditionary Forces attacked directly into the teeth of German defenses in the Argonne Forest. Once again, the American army exited the conflict with both huge casualties (more Americans died in the seven weeks of the Meuse-Argonne campaign than during years in Korea or Vietnam) and victory. In World War II, the American army again decided that the quickest way to achieve victory was to implement a strategy of annihilation by attacking into the strength of the German army in France. Russell F. Weigley in The American Way of War entitles his chapter on World War II in Europe "The Strategic Tradition of U.S. Grant."° In spirit if not in body, the American army of World War II landed in Normandy alongside its Civil War and Great War brethren.

   Theoretically, the American army assembled in Great Britain for the Cross-Channel invasion had many advantages that both its ancestors and the German army lacked. Since mid-April 1944 the Allied air forces had attacked the rail networks in Western Europe to degrade the enemy’s ability to
transport reinforcements to France. Hundreds of bombers flew sorties on D-Day in an attempt to destroy or neutralize enemy coastal fortifications prior to the landing of the first wave of troops. Dozens of battleships, cruisers, and destroyers supported the invasion armada with naval gunfire support. An Allied deception plan code-named Fortitude fixed the German Fifteenth Army in the Pas-de-Calais, the most direct avenue of approach into France from the Channel. These advantages would prove their worth in time.

On D-Day, 6 June 1944, they did not provide the decisive advantage that invasion planners had hoped. Air interdiction could slow, but not halt, the German reinforcement of the Seventh Army in Normandy. None of the 13,000 bombs dropped by the B-17 and B-24 bombers hit their targets on the beach. Poor weather caused the bombardiers to delay bomb release for fear of hitting friendly troops, with the result that their bombs hit as far as three miles inland.² Pre-invasion naval gunfire support failed to destroy enemy fortifications sited to cover the beaches as opposed to the sea approaches. German guns concealed from seaward observation survived to pin American troops on the beach in a deadly crossfire.³ Finally, although the German Fifteenth Army remained pinned to the Pas-de-Calais, the German Seventh Army in Normandy was able to utilize both man-made and natural obstacles and fortifications to augment its still-considerable fighting power in a defensive battle.
One of the reasons for the failure of Allied air and naval power to prepare the invasion beaches adequately was the unwillingness of Army leaders in Europe to learn lessons from the amphibious invasions in the Pacific. In November 1943 the 2d Marine Division invaded Tarawa in the Central Pacific and took the island at the cost of over 3,000 casualties. The Marines quickly learned the value of coastal fortifications and the need to suppress them with pinpoint bombing and naval gunfire missions. Saturation bombing devastated Tarawa, but did little to affect the well fortified Japanese defenders. The Army forces in the Pacific put these lessons to good use in subsequent amphibious operations, such as the assault of Kwajalein atoll in the Marshall Islands by the 7th Infantry Division on 31 January 1944. The conquest of Kwajalein was nearly flawless. As a result, General Marshall ordered the commander of the 7th Infantry Division, Major General Charles H. "Pete" Corlett, to England to command one of the corps in the First U.S. Army and to lend his expertise to the planners of Operation NEPTUNE, the code-name for the amphibious portion of Operation OVERLORD. General Dwight D. Eisenhower, Lieutenant General Omar N. Bradley, and their staffs chose to ignore Corlett’s advice and instead dismissed the Pacific experience as "bush league." In Normandy air and naval forces resorted to saturation bombing in the preparatory bombardments of the beaches, with
negligible results on the German defenders. As a result, the outcome of the most critical Allied joint operation in World War II depended on the ability of the six infantry and three airborne divisions committed on D-Day to establish a beachhead with less than adequate fire support (Figure 29).

The three American infantry divisions to land on D-Day—the 1st, 4th, and 29th Infantry Divisions—operated according to a plan over which they had little control. "Until the troops actually got ashore the tactical commanders had no control over when they would be put in the water or how they would be beached," stated Major General Charles H. Gerhardt of the 29th Infantry Division, "and although the plan was meticulous in its detail the practicalities of the situation made necessary many command changes on the spot by the people most interested, the tactical commanders concerned." Indeed, the plan for Operation NEPTUNE was too detailed. Major Carl W. Plitt, the operations officer of the 16th Infantry Regiment which landed on OMAHA Beach, reported after the operation, "There was continual interference by higher echelons in detailed matters to such an extent that at times, the [regimental] planning staff wondered where in the 'Hell' they stood. Craft were loaded with vehicles and diagrams made before personnel were assigned and to get some semblance of order and a tactical situation out of the mess called for a certified public accountant." In an attempt to
FIGURE 29
OPERATION OVERLORD, 6 JUNE 1944
orchestrate the landings of different units to the exact minute, the planners failed to account for the inevitable fog and friction of war on the beaches.

On OMAHA Beach, almost nothing went right for the 1st and 29th Infantry Divisions on the morning of D-Day (Figure 30). Of the thirty-two amphibious tanks of the 741st Tank Battalion that were supposed to land ahead of the 16th Infantry Regiment in the zone of the 1st Infantry Division, twenty-six sank due to high seas and the decision of the Navy to launch the tanks over 6,000 yards from the beach.9 The tanks attached to the 29th Infantry Division were more fortunate, but the division lost nearly the entire 111th Field Artillery Battalion when its DUKWs (amphibious trucks) swamped in the rough seas on the long journey to the beach.10 An unexpected tide and poor observation caused many units to land hundreds or even thousands of yards east of their objectives and intermixed different units together in a jumble of confusion.11 The 116th Infantry Regiment of the 29th Infantry Division suffered the most from the poor landings, since many of its units ended up in the zone of the 16th Infantry Regiment to the east. Casualties among the infantry in the first wave—hit by withering fire from numerous machine guns—were horrendous and in some companies exceeded 50 percent. Most landing craft grounded on sandbars fifty to one-hundred yards from shore, which made the assault troops easy targets as they slowly waded to
FIGURE 30
OMAHA BEACH, 6 JUNE 1944
shore. Seasick and too burdened by equipment, the soldiers of the first wave were exhausted by the time they reached dry land.\textsuperscript{12}

The inadequate pre-invasion bombardment, the unexpected discovery of the German 352d Infantry Division in the area, and the poor weather had combined to make a shambles of the carefully choreographed plan for the landings on OMAHA Beach. As succeeding waves—which included many combat service support units—landed according to the pre-determined time table, they only added to the confusion on shore. Only the initiative of a few officers and noncommissioned officers prevented the Germans from hurling the invasion force back into the sea and saved the American forces from an ignominious defeat. As soldiers clustered behind the sea wall and shingle embankment that protected them from enemy fire, a few brave leaders managed to coax them forward to attack the German defenses. One salutary consequence of the naval bombardment was the numerous brush fires that erupted on the bluffs overlooking the beach. Under the concealment of the smoke from these fires, several groupings were able to cross the beach and ascend the bluffs beyond.\textsuperscript{13} The heroic efforts of several destroyer captains, who brought their ships to within several hundred yards of the shore to blast enemy strongpoints, also assisted the assault echelons.\textsuperscript{14}
Although all of the combat actions on OMAHA Beach were important, the assault from Easy Red Beach that opened up the E-1 and E-3 draws turned out to be absolutely critical since it provided an avenue inland for reinforcements. Here the 2d Battalion of the 16th Regimental Combat Team (RCT) managed to work its way up the bluffs between the E-1, E-3, and F-1 draws. The success was the result of initiative provided by the leaders of the Big Red One at the small-unit level.

The experience of Company E is illustrative of the effort exerted on OMAHA Beach by the American infantrymen. Company E landed in the first wave at 0630 hours approximately 1000 yards east of its intended objective on Easy Red Beach. Men exited their landing craft into shoulder high water laced with German automatic weapons fire. Soldiers vomiting from seasickness and intake of salt water slowly waded ashore under their heavy loads; many of those hit in the water drowned. Isolated sections of the company took a good hour to reach the protection of the shingle embankment. Weapons jammed with sand refused to fire; disciplined soldiers field stripped their weapons and cleaned them under fire.\(^{15}\)

Junior leaders stepped forward to accomplish the mission. On Easy Red Beach, Second Lieutenant John Spaulding's 1st Platoon of Company E was one of the few units to land intact in the first wave. After arriving at
the shingle embankment, the platoon sergeant, Technical Sergeant Phillip Streczyk, had one of his men blow a gap in the enemy wire. Second Lieutenant Spaulding led his men through the gap and up the bluffs between the E-1 and E-3 draws. The platoon worked its way up a small trail and emerged in the rear of the enemy entrenchments guarding the bluff. Spaulding’s men infiltrated through the German trenches and attacked them from the rear. The action neutralized the strongpoint facing the E-1 draw, which allowed succeeding waves to land with fewer casualties than the first wave. Company E began the day with 183 men and lost 104 of them on the beach; the attack inland cost the company only one casualty.16

In the second wave, Company G also landed largely intact and advanced up the bluff to positions near Colleville. The gaps opened up by these actions became a funnel for reinforcements. Senior leaders such as Colonel George A. Taylor, commander of the 16th Infantry Regiment, and Brigadier General Willard G. Wyman, the assistant division commander of the 1st Infantry Division, pushed units forward off the beach.17 The 18th, 26th, and 115th Infantry Regiments all poured through Easy Red and Fox Green Beaches by the evening of D-Day. Vehicles clogged the beach and jammed Exit E-1, but they were finally moving inland.

In the west, the 29th Infantry Division also managed to claw its way ashore in the face of bitter enemy resistance
at Les Moulins and Vierville. The first wave of the Blue and Gray soldiers from the 116th Infantry Regiment suffered miserably. Company A was one of the few units to land where it was supposed to land—right in front of the D-1 draw north of Vierville. The Germans in the fortifications there, barely touched by the pre-invasion bombardment, massacred the men of the company as they disembarked from their landing craft. Company A lost 96 percent of its soldiers killed, wounded, or missing on D-Day—the highest rate of loss of any unit in the invasion.\(^\text{18}\)

Luckily for the men of the 116th Infantry Regiment, most of them landed to the east of their assigned objectives. Men overloaded with sixty to seventy pound packs slowly made their way to the protection of the sea wall. There they were safe from enemy fire, but they were also disorganized and confused. Within the first five minutes of landing, the plan for the invasion had to be discarded. There was no way to dislodge the German defenders from their fortifications in the D-1 and D-3 draws in front of Vierville and Les Moulins with frontal assaults. As was the case in the zone of the 1st Infantry Division, junior leaders stepped up to improvise an attack up the bluffs between the German strongpoints. For the most part they did not act out of bravery or patriotism, but out of common sense. To stay on the beach meant death; if they advanced up the bluffs, the soldiers had a chance to
Aided by fire from destroyers which hammered enemy strongpoints and smoke from grass fires which partially obscured their movement, soldiers of the 116th Infantry Regiment scaled the bluffs of OMAHA Beach. By the end of D-Day they had taken Vierville and isolated the German defenders in the D-1 and D-3 draws. The Assistant Division Commander, Brigadier General Norman D. Cota, seemed to be everywhere—leading, cajoling, inspiring, directing, and organizing. When Company C finally arrived in Vierville after moving up the bluffs, the men "met Cota walking down the narrow main street, twirling a pistol on his index finger like an Old West gunfighter. 'Where the hell have you been, boys?' he asked." Cota led a group of soldiers down the D-1 draw to seize it from the rear and then organized an operation to open the exit to vehicular traffic.

At a cost of 3,000 casualties, V Corps had managed to carve a shallow beachhead extending approximately a mile-and-a-half into France. The assault at OMAHA Beach had succeeded, but probably not in the way that any of the planners had envisioned back in Great Britain. On a day when the Allies dropped tens of thousands of tons of high explosive in Normandy, ironically the key events on OMAHA Beach took place with rifles and grenades at the company and platoon level.
In comparison to the attack on OMAHA Beach, the assault by the 4th Infantry Division on UTAH Beach went smoothly (Figure 31). While the 82d and 101st Airborne Divisions fought to secure the causeways over the flooded ground behind UTAH Beach, the 4th Infantry Division waded ashore nearly unmolested. The strong tide and obscuration of the beach by smoke and dust caused the assault force to veer off course to the south of its objective; fortunately, the enemy was not present in strength in the area where the force landed. Brigadier General Theodore Roosevelt, Jr., the assistant division commander, and Colonel James Van Fleet, the commander of the 8th Infantry Regiment, adjusted their plans to the situation and soon had their units attacking inland to secure the area behind UTAH Beach. By evening of D-Day the 8th Infantry Regiment had made contact with elements of the 101st Airborne Division. Flooded ground and enemy resistance prevented link-up with the 82d Airborne Division until the following day. The entire 4th Infantry Division had landed in less than 15 hours at a cost of fewer than 200 casualties.

Roosevelt played a key role in the success of the 4th Infantry Division in Normandy. He loved soldiers, had an aggressive spirit, an acute tactical sense, and generated high morale in the division. While the 4th Infantry Division was in its marshalling area, General Bradley came to give the officers a pep talk. "Gentlemen," he began,
FIGURE 31
UTAH BEACH, 6 JUNE 1944

"this is going to be the greatest show on earth, and you are honored by having grandstand seats." Hearing that, Roosevelt whispered out in his deep bass voice, "Hell, goddamn it! We're not in the grandstand. We're down on the gridiron." The comment lightened the mood, but left Bradley somewhat flustered. Roosevelt would die of a heart attack in Normandy, but the Army awarded him a Medal of Honor as a result of his heroic service there.

Despite the massive amounts of firepower available to the assault forces at OMAHA and UTAH Beaches, the invasion succeeded primarily due to the skill and bravery of the soldiers in the three infantry divisions who waded ashore under their heavy burdens on D-Day. The training in England had focused on this one event, but probably did not prepare the soldiers for the confusion they found on the beaches. Initiative at the small unit level and some outstanding leadership by officers such as Cota, Roosevelt, and Van Fleet enabled the Americans to establish their beachheads despite the overly-complex plan for the invasion that failed the test of combat. D-Day also showed that the sons of democracy, citizens turned into soldiers in a short period of time, could improvise and prevail against the supposedly superior military system of the Wehrmacht. For Nazi Germany, D-Day was a harbinger of disaster.

The task before the Americans was now clear: expand the beachhead, land reinforcements, gather supplies, and
break out of Normandy. Allied leaders would soon learn the effectiveness of the relatively untested American army in combat against a bloodied, but still-experienced foe.

For a week after landing at OMAHA Beach on D-Day, the 1st and 29th Infantry Divisions attacked to enlarge the beachhead south and to link up with the 101st Airborne Division near Isigny and Carentan to the west (Figure 32). V Corps also committed the 2d Infantry Division and 2d Armored Division to the battle when they landed. The 2d and 29th Infantry Divisions, still new to combat, made some mistakes but adapted quickly. The 2d Infantry Division had difficulty in its first attack on Trevieres, mostly due to the fact that its heavy weapons were still entangled in the mess on OMAHA Beach. Despite the division's hasty attack immediately upon debarkation, the 2d Infantry Division recovered well after its first day of battle and went on to seize the Cerisy Forest on 10 June. The 29th Infantry Division also continued to learn from its errors. On 9 June the 2/115th Infantry lost 150 men in a German ambush due to poor security in its night defensive position. The resiliency of American logistics and administration became evident after this disaster. The next day, the 2d Battalion received 110 replacements and new equipment and moved back into the line. The attack ground on.

Allied air interdiction of the transportation network in France hampered German reinforcements moving to Normandy
FIGURE 32
V CORPS ADVANCE TO CAUMONT

and greatly assisted the Army in its effort to expand the beachhead.\textsuperscript{28} The priority of German effort went to holding the key road center of Caen in the British zone of operations. As a result, German strength in the Cerisy Forest-Caumont area was not sufficient to hold the line. The veteran 1st Infantry Division penetrated the weak enemy front and seized Caumont on 13 June.

The First U.S. Army was on the verge of decisively rupturing the enemy front, but General Bradley did not take advantage of the Big Red One's success. Instead, on 13 June he ordered V Corps to halt offensive operations and defend in sector, activated XIX Corps to enlarge the Isigny-Carentan corridor, and shifted priority of effort to VII Corps in the Cotentin Peninsula.\textsuperscript{29} Until Major General "Lighting Joe" Collin's forces took Cherbourg and the logistical situation improved, the advance south of OMAHA Beach would have to wait. The battle would resume on 7 July against a heavily reinforced German front. The ensuing battle of the hedgerows would prove once again that in combat, good things do not necessarily come to those who wait.

The terrain in Normandy--the area the French referred to as the \textit{bocage}--provided the defender with a marked advantage. The \textit{bocage} is a mass of small, irregularly shaped farm fields separated by hedgerows that have grown over the centuries into formidable barriers. The hedgerows
consist of earthen banks several feet high topped with a mass of tangled vegetation. Each hedgerow forms a natural breastwork and obstacle to movement. Sunken roads often run between hedgerows, thus channelizing vehicular movement. The bocage provided natural cover, concealment, and ready-made kill zones—a patchwork quilt ideal for the defense. Soldiers dug fighting positions directly into the base of hedgerows and commanders positioned automatic weapons at the corners of adjacent fields to cover the approaches to the defensive positions. Anti-tank guns covered openings in the hedgerows and the roads between fields. Hedgerows served as natural antitank obstacles, limited observation and fields of fire, and cut the battlefield into a series of disjointed fights in which the attacker often found it difficult to bring his numerical superiority to bear.\(^{30}\)

American divisions struggled to find an adequate solution to attacking hedgerows without taking exorbitant casualties. Armies in World War I learned that operational level maneuver was simply not possible until they solved the tactical impasse of trench warfare.\(^{31}\) A similar situation arose in Normandy in 1944, where American leaders chafed at their inability to maneuver against the German army. Attacking hedgerows provided numerous problems. Each field bordered by hedgerows, properly organized for the defense, formed a fortified position that an attacking force had to assault individually. Units could not maintain contact with
their neighbors in the advance, since the hedgerows between fields limited observation and communication, except by radio. The excellent cover and concealment of the hedgerows provided the defender with the advantage of surprise, and the poor observation afforded by the terrain limited the effectiveness of supporting heavy weapons and artillery. Tanks were of limited value until the American army developed a solution that allowed them to penetrate through hedgerow walls. As a result of these factors, coordinated attacks above the company level were difficult if not impossible.32

The American army had not trained adequately before D-Day to cope with combat in the bocage, despite available evidence that should have suggested the need to do so.33 Combat in the hedgerows required the close coordination of all arms at the small unit level and maximum individual initiative from small unit leaders. The after-action report of the 9th Infantry Division for June 1944 stated, "The entire operation resolved itself into a species of jungle or Indian fighting, in which the individual soldier or small groups of soldiers play a dominant part. Success comes to the offensive force which employs the maximum initiative by individuals and small groups."34 Only a few American units, however, possessed the experience and leadership at the small unit level to achieve the "maximum initiative by individuals and small groups" called for by the division's
after-action report. Faced with an unexpected situation for which they were not prepared, American infantry divisions struggled to accomplish their missions while adjusting their tactics to the situation on the ground. For many American infantrymen, Normandy was a Hobbesian universe where life was solitary, poor, nasty, brutish, and short.

The 90th Infantry Division suffered as much as any American division in the bocage and more than most. With the 4th Infantry Division tied up in fighting to the north of UTAH Beach, the VII Corps commander, Major General J. Lawton Collins, committed the 90th Infantry Division in an attack to the west of the 82d Airborne Division's bridgehead over the Merderet River on 10 June (Figure 33). The commander of the 90th Infantry Division, Brigadier General Jay W. MacKelvie, attacked with the 357th and 358th Infantry Regiments shortly after first light. Before even completing the passage of lines, soldiers from the division fired on soldiers of the 325th Glider Infantry from the 82d Airborne. Once through friendly lines, the 90th Infantry Division's attack went nowhere against opposition from the German 91st Division.35 "One of the regiments had a battalion that was out in front of us there, in a clearing--milling around--without any leadership apparently at all," Teddy H. Sanford, the commander of the 1/325th Glider Infantry, stated later. "The damnest situation we had ever seen, a desperate situation. We sent people over there and got them lined up
FIGURE 33
VII CORPS CUTS THE COTENTIN PENINSULA, 10-18 JUNE 1944
and marched them back through our lines." The division continued attacking for several days and incurred hundreds of casualties for minimal gains. Poorly trained and led, the 90th Infantry Division failed miserably in its first combat. On 13 June General Collins relieved MacKelvie along with two of his regimental commanders.

The situation forced Collins to revise his plan of attack. On 14 June the 9th Infantry Division passed through the 90th Infantry Division to assume the main effort in the attack west. Collins ordered the 82d Airborne to attack to the south of the 9th Infantry Division. Both divisions made headway through the difficult terrain and captured bridgeheads over the Douve River. On 17 June the 47th Infantry Regiment moved southwest and passed through the positions held by the 82d Airborne Division at St. Sauveur Le Vicomte. By 2200 hours the 1st Battalion had severed the last German held road leading to Cherbourg. The next day the 9th Infantry Division reached the sea on the western side of the Cotentin Peninsula, thereby isolating Cherbourg.

Elements of the trapped German 77th Division attempted to break out, but the 9th Infantry Division destroyed a large part of the enemy force:

A column of vehicles, infantry and artillery attacked the 1st and 2nd Battalions, 60th Infantry. A fierce artillery concentration from all available guns [known in the division as a ZOMBIE] was brought down by Division Artillery on the head of this column...The concentration then
was adjusted so as to creep up the congested road inch by inch from the crossroads to a point 5 miles to the northwest. The infantry completed the devastation with small arms and anti-tank fire. 

Destroyed German vehicles and dead bodies littered a five mile stretch of road. The division parried other breakout attempts during the day, even while Major General Manton S. Eddy wheeled his unit ninety degrees to face north in preparation for an attack on Cherbourg. Only a handful of divisions on either side could have performed this feat; the 9th Infantry Division was one of the best.

On 19 June the 9th Infantry Division attacked north towards Cherbourg in conjunction with the 4th and 79th Infantry Divisions, and reached the outer perimeter of the port defenses the next day (Figure 34). The divisions used the 21st of June to reconnoiter and plan an assault, which began the next day with a massive aerial bombardment on the fortifications of the city. Despite the bombing, German resistance was stiff. Infantry followed closely behind artillery concentrations, but tank destroyers and artillery fire were necessary to reduce individual strongpoints. The fighting continued in the city until 26 June, when the 39th Infantry Regiment captured the German fortress commander and his staff. The 4th Infantry Division took charge of the city on 27 June, and the 9th Infantry Division moved to clear enemy forces from the Cap de la Hague peninsula. By mid-day on 1 July, the 9th Infantry Division had completed
FIGURE 34
VII CORPS SEIZURE OF CHERBOURG
its mission, and moved to an assembly area to integrate replacements, train, and take a well-deserved rest.40

The contrast between the performance of the 9th and 90th Infantry Divisions during the operations to isolate and seize Cherbourg could not have been more stark. The 9th Infantry Division performed like the experienced, veteran division that it was in the Cotentin Peninsula. Ernie Pyle wrote:

The Ninth was good. In the Cherbourg campaign, it performed like a beautiful machine. Its previous battle experience paid off. Not only in individual fighting but in the perfect way the whole organization clicked...The Ninth did something in that campaign that we hadn't always done in the past. It kept tenaciously on the enemy's neck. When the Germans would withdraw a little the Ninth was right on top of them. It never gave them a chance to reassemble or get their balance.41

Pyle's observation is not hard to explain. The 9th Infantry Division had merely applied the lessons it had learned in Africa, Sicily, and in training. Other infantry divisions, with the exception of the 1st Infantry Division, learned through on-the-job experience. Given enough time, most would become as proficient as the veteran divisions.

The performance of the 90th Infantry Division in its first battles, on the other hand, caused the First U.S. Army staff to consider breaking up the unit and using its soldiers as replacements.42 One can ascribe the poor performance of the division to two causes: poor leadership and poor training. General William E. Depuy later recalled
the division's first attacks in Normandy:

At first, we just attacked straight ahead because that's the way we had been trained, two up and one back...But what we finally learned, which is what all soldiers finally learned, is don't attack them where they are. The way we cracked those positions was simply by finding a hole somewhere around the flank. Find a hole and get in their rear, and the whole bloody thing would collapse. Then you'd have them in the open. That's the kind of thing I wished that we had learned in the two years in the United States and the three months in England...We learned that the hard way and from then on to the end of the war, all the good commanders fought all their battles by looking for a way around, and practically never went straight forward. Every time you had to go straight forward, you took high casualties.43

Units fight like they train; the 90th Infantry Division fought poorly in part because it trained poorly prior to entering combat. The other problem with the 90th Infantry Division was its leadership. John Colby, author of War from the Ground Up, a recent and thoughtful history of the 90th Infantry Division, believes that poor leadership, not training deficiencies, caused the majority of the division's problems in Normandy.44 The first two division commanders, General MacKelvie and his replacement, Major General Eugene Landrum, receive exceptionally sharp criticism. McKelvie "should never have been given command of a division" and was "critically weak in all aspects of leadership, command, and tactics."45 Landrum, later relieved of command on 25 July, was "short, fat, uninspiring" and "commanded the Division from an arm chair in a cellar."46 Colby berates
five of the nine original battalion commanders for poor leadership abilities. Depuy thought his regimental commander, Colonel P.D. Ginder, was "a horse's ass of the worst order. Goddamned fool. And didn't know anything about anything, but he was very ambitious and a wild man...he was a disaster." Depuy goes on to say that Landrum "had no impact on the division other than through the command post and distant orders. He just wasn't a good leader...He was no tactical general. He was a map general."48

Given these training and leadership deficiencies, the amazing thing about the 90th Infantry Division was not how much it suffered in Normandy, but how quickly it recovered and turned itself around. Commanders who survived training but failed in combat did not last long. More able men rose within the division "through an arduous process of combat selection." Many of the battalion and regimental commanders who finished the war with the division—such as Depuy—began the Normandy campaign as captains.

The most important change came on 25 July when Brigadier General Raymond S. McLain took command of the division. McLain was a banker from Oklahoma City and the only National Guard officer promoted to command a corps during World War II. Previously he had commanded the artillery of the 45th Infantry Division in Italy and held the same position in the 30th Infantry Division. His impact
on the 90th Infantry Division was salutary and immediate.

Depuy states:

We had confidence in McLain. He wasn't asking us to do stupid things. And he visited all the time...He knew what troops could do and couldn't do, and he told us we were okay, but the leadership had been bad. And he was right. So what happened? We had some successes...and success fed on itself until...we were beginning to feel that we were soldiers. In Normandy the division had no pride, because it had no successes to be proud of...victories provided confidence and confidence made a good division. And I think that happened to dozens of divisions. But we needed it more than most.50

McLain had the advantage of starting with an almost clean slate of subordinate commanders when he took command of the division; most of the incompetent officers had been weeded out. In addition to changes at the top and the middle levels, skilled small unit leaders also began to emerge through the crucible of combat. Soldiers learned the grim business of killing at the sharp end of fighting. By the time the 90th Infantry Division left Normandy, it was already a capable combat organization. By the end of the war, Eisenhower, Bradley, and Patton all listed it as one of the best divisions in the European Theater of Operations.51

With Cherbourg in American hands, General Bradley could shift the main effort of the First U.S. Army. Allied leaders now focused on expanding the beachhead to a point where the ground forces could attack decisively to rupture the German front line irreparably. To accomplish this goal,
the forces south of OMAHA Beach had to attack south to seize the crucial communications center of Normandy at St. Lo. The resulting clash was the most bitter, hardest-fought battle of the Normandy campaign.

The German army defended Normandy tenaciously. Hampered by lack of air support and an antiquated logistical system, the German army took advantage of the terrain, established defensive doctrine, and its qualitatively superior weapons to exact a heavy toll on the attackers. German defensive doctrine was an outgrowth of the bitter trench warfare of World War I. In the fall of 1916 the German army adopted a new defensive doctrine in response to the Allied attacks that year. Described as an "elastic defense-in-depth," the doctrine stressed flexibility in the use of terrain, maximum use of automatic weapons and artillery to break up attacking formations, and immediate counterattacks to take advantage of the attacker's confusion upon reaching the main defensive line.52 This doctrine had changed little by 1944.

In Normandy, the bocage facilitated the construction of defensive positions in depth. Often an attack would falter upon reaching only the advanced position (Vorgeschobene Stellung) or outpost zone (Gefechtsvorposten) of the German defensive line. The enemy soldiers in these positions, armed with automatic weapons, could hold up an attacking force for hours before withdrawing to the main line of
resistance, which the Germans often sited on the reverse slope of a hill or ridge. If a force succeeded in penetrating the main defensive position, German doctrine called for an artillery barrage to annihilate the enemy forces followed by a counterattack to retake the position.

The German army compensated for its lack of manpower by arming its troops with increasing numbers of automatic weapons. By 1944, German infantry divisions numbered only 12,500 men, a reduction of 4,500 soldiers from earlier in the war. In Normandy, most German divisions could not even muster this much strength. The number of automatic weapons, however, increased from 700 sub-machine guns, 527 light machine guns, and 116 heavy machine guns in the old division to 1503 sub-machine guns, 566 light machine guns, and 90 heavy machine guns in the 1944 organization. Parachute divisions, such as the one which defended the approaches to St. Lo, contained an incredible 3026 sub-machine guns, 930 light machine guns, and 80 heavy machine guns. In contrast, American infantry divisions in 1944 only contained 243 automatic rifles, 157 light machine guns, and 236 heavy machine guns.

German machine guns, moreover, were of much higher quality than their American counterparts. The deadly German MG 42 had a rate-of-fire of 1,200 rounds-per-minute, while the American M1919 Browning only fired 500 rounds-per-
While the predominant German sub-machine gun, the MP 40, had a short range and a tendency to jam, it was an excellent weapon for use in the confined hedgerow territory. The American Browning Automatic Rifle (BAR) was an excellent weapon, but there simply were not enough of them around. Not until 1945 did the American army increase the authorization of the BAR from one to two per squad, although many squads acquired extra automatic rifles on their own initiative. In the meantime, the American commanders relied on the 6,518 M1 semi-automatic rifles in the infantry division to achieve "fire superiority" over the enemy.

Gaining a firepower advantage over the German defenders in Normandy was easier said than done. In theory, an American infantry unit would establish a "base of fire" with artillery, mortars, machine gun, and rifle fire to pin down enemy defenders, which would allow a maneuver element to close with and destroy the enemy at close range. Some commanders, such as Bradley and Patton, advocated "marching fire," whereby infantry units would advance and fire simultaneously to keep the defenders' heads down. This technique was usually suicidal to the force that attempted it and had very little utility in most situations.

In practice, American units relied on artillery fire to suppress enemy positions, since they lacked the number of automatic weapons necessary to accomplish this task with
direct fire. In Normandy, however, the hedgerows protected the Germans from the worst effects of American artillery. The close ranges and limited visibility also made adjustment of artillery difficult; mortars often were the indirect fire weapon of choice in the bocage. Unfortunately, the demand for mortar ammunition was so great that shortages existed until the breakout from Normandy in August, and often units had to do without the amount of mortar fire that they needed. Only slowly did the American army learn that suppression of enemy positions required the close coordination of all arms at the small unit level. Even a lone surviving German infantryman, armed with his squad's MG 42 and adequate ammunition, could hold up an unsupported American infantry company in the advance for hours.

These were the challenges that faced the First U.S. Army in its attack to seize ground more suitable for launching a large-scale offensive to break out of Normandy. After a three-week hiatus while VII Corps cleared the Cotentin Peninsula, Major General Troy Middleton's VIII Corps began the "battle of the hedgerows" on 3 July with an attack from the base of the Cotentin Peninsula south towards Coutances (Figure 35). The 79th and 90th Infantry Divisions and the 82d Airborne Division made only slow progress against heavy resistance and under poor weather conditions, which kept air support grounded for much of the time.
FIGURE 35
THE BATTLE OF THE HEDGEROWS, 3-18 JULY 1944
General Collin's VII Corps, now redeployed to the east of VIII Corps, joined the attack south on 4 July with the 83d and 4th Infantry Divisions, but it too made little headway in the narrow neck of dry land crowded between the Taute River bottomlands and the swamps of the Seves River.66 Decades after the war historians would decry the inability of the American infantry divisions to gain ground more rapidly, but at the time the report of the German Seventh Army in Normandy credited American commanders "with facility in tactical maneuver and with being quick to exploit favorable situations."67

On 7 July General Corlett's XIX Corps opened its attack with an assault by the 30th Infantry Division across the Taute-Vire Canal. XIX Corps' objective was St. Lo, the most decisive piece of terrain in the American zone due to the eight roads and railroad that converged there. With St. Lo in American hands, the German army would be hard-pressed to reinforce the LXXXIV Corps that defended the ground between St. Lo and the western coast of Normandy, thus paving the way for a decisive breakthrough in that area.68

One could hardly conceive of a more difficult mission for a division new to combat than a deliberate river crossing, but that is what the 30th Infantry Division faced in its attack across the Taute-Vire Canal. The division had entered combat on 15 June, but had spent the ensuing three weeks defending in place.69 This period allowed some
limited contact with enemy forces and helped to season the green soldiers. Nevertheless, the attack on 7 July was the first large-scale combat action for most of the soldiers. "The shock of that first fight is something they just can't understand until they have been in it," General William K. Harrison, Jr., the Assistant Division Commander, stated later.70 To ensure that the soldiers understood their roles in the upcoming attack, units conducted intensive rehearsals, to include sand table drills and actual practice river crossings.71

Due to its gradual exposure to combat and intensive preparations, the 30th Infantry Division conducted the assault crossing smoothly. The division performed well for its initial operation, but still had much to learn about combat in the hedgerows:

In general, attacking units were finding what every division learned the hard way in its opening battle in Normandy: that hedgerow terrain demanded tactical skill and know-how which green units--and even those experienced in African or Sicilian fighting--did not initially possess. The 30th Division was no exception. Coming into Normandy in mid-June, the division had had plenty of warning of trouble, and had trained to meet it. But there was no substitute for battle experience to bring out the concrete difficulties of action or test the methods for meeting them...All this took time to learn and more time to digest; most units in the July battle were training as they fought.72

Indeed, most American infantry divisions quickly learned the methods of hedgerow fighting necessary to attack in Normandy with little assistance from higher headquarters.73
The American army in World War II never fully centralized nor formally institutionalized a system for gathering lessons from the field, digesting them, and then disseminating them back down to lower levels. The lessons learning "system" therefore left much discretion in the hands of local commanders. This initiative reinforced the critical importance of organizational leadership in collecting and distilling lessons learned. The key leadership in this regard was at division level. Commanders at regimental level and below were too focused on the current battle, corps commanders and above too removed from the small units which did the actual fighting. If units were to alter their tactics quickly, division commanders and their staffs would have to precipitate the change.

The ability of division commanders to adapt to the situation on the ground in Normandy was the key difference which allowed some divisions to succeed in hedgerow fighting while others initially failed. All divisions sooner or later overcame the disadvantages of the terrain, but the slow learners paid a higher price in casualties and time lost. Often division commanders or operations officers would append a list of "lessons learned" to the monthly after-action report. The 1st, 3d, 9th, and 29th Infantry Divisions, among others, began this practice early and continued it throughout the war. More importantly, successful divisions ensured that subordinate units
understood and used these lessons in combat.

The success of the 30th Infantry Division allowed General Corlett to expand the attack. First U.S. Army assigned the 9th Infantry Division, fresh from its victory at Cherbourg, to XIX Corps; the division went into the line to the west of the 30th Infantry Division. To the east, the 29th Infantry Division began its attack south towards St. Lo on 11 July. The 35th Infantry Division would also soon join in the attack.

The Germans identified XIX Corps as the American main effort and counterattacked on the night of 10 July with the elite Panzer Lehr Division to the west of the Vire River (Figure 36). The Germans now received a lesson in the difficulty of attacking in the hedgerows. General Fritz Bayerlein, who commanded the Panzer Lehr Division, did not know that the 9th Infantry Division had recently been moved south of the canal and was now in the line. As a result, the German counterattack fell upon a seasoned, battle-tested unit near peak efficiency. Although the 901st Panzergrenadier Regiment, supported by Panther and Mark IV tanks, succeeded in penetrating the boundary between the 39th and 47th Infantry Regiments to a depth of up to 2,000 yards, the Americans refused to panic. Instead, General Eddy ordered the 39th and 47th Infantry Regiments to seal the breach, while the 899th Tank Destroyer Battalion, division artillery, and aircraft systematically destroyed
FIGURE 36
COUNTERATTACK OF THE PANZER LEHR DIVISION, 11 JULY 1944

the German armor and infantry that had broken through the line. By 2100 hours on 11 July, the 9th Infantry Division had eliminated the attacking German units and had regained the ground lost early in the morning.76

The 30th Infantry Division likewise succeeded in halting the counterattack of the 902d Panzergrenadier Regiment in its zone of operations. The historian of the operation concludes:

Panzer Lehr had been severely mauled by the combined onslaughts of the U.S. 9th and 30th Divisions, and was now crippled to an extent that removed the possibility of further large-scale counterattack west of the Vire.77

The German counterattack convincingly demonstrated that well-trained and well-led American infantry divisions were as good or better than their German counterparts in Normandy. Historians who have tried to prove otherwise have seriously underestimated the advantages conferred by the hedgerows on the defender. The American army was the only force in Normandy that learned how to attack successfully in the bocage.

The 29th Infantry Division began its attack to seize St-Lo on 11 July (Figure 37). The division had practiced combined arms techniques before the attack designed to break through the tough hedgerows. The division's main effort, the 116th Infantry, the "Stonewall Brigade" of Civil War fame, was reinforced with tanks from the 747th Tank Battalion and the engineers of the 121st Engineer Combat
FIGURE 37
THE BATTLE OF ST. LO, 11-18 JULY 1944
Battalion. The Sherman tanks supporting the division had steel prongs welded to their final drive assemblies; these prongs would dig into the hedgerow embankments and either allow the tank to break through the hedgerow with the power of its engine or dig holes into which the engineers would place demolitions to blow the hedgerow apart.\textsuperscript{78}

The 2d Infantry Division in the V Corps zone also attacked on 11 July to take Hill 192, a tactically important piece of high ground east of St-Lo. The 2d Infantry Division had also developed a tank-infantry-engineer combined arms solution for dealing with the hedgerows.\textsuperscript{79} The training paid off, as the division took Hill 192 from the German 3d Parachute Division in one day, an objective that had eluded the 2d Infantry Division for weeks after D-Day.

From 12-14 July, the German units in front of XIX Corps stiffened; American units ground out advances measured in yards at high cost to both attacker and defender. Between 11 and 13 July, the German 3d Parachute Division lost 4,064 men killed, wounded, and missing.\textsuperscript{80} The Americans could replace their losses; the Germans could not. Few experiences were as terrifying as that of an infantry replacement fed directly into combat. One American officer in the 29th Infantry Division later wrote:

On occasion, new men were fed into units actively locked in battle. Sent in by night and placed in among dark forms who occupied gravelike holes scooped out behind hedgerows, they could hardly
have known where they were...Sometimes, a new man
did die before dawn, and none around knew him by
sight or name...without the sustaining strength of
unit pride or comradeship, he had started battle
reduced to the final resource with which every man
ends it: himself, alone.81

General Gerhardt understood the problems associated with
feeding replacements directly into units in contact. After
the battle for St. Lo, he adjusted division policy to ensure
that only battalions in reserve positions received
replacements.82

General Corlett had XIX Corps execute an all-out attack
on 15 July, just as the German defensive lines had been
stretched to the limit. The 9th and 30th Infantry Divisions
in what was now part of the VII Corps zone attacked to seize
positions along the St-Lo Periers road. The pressure forced
the German Seventh Army to commit units of the 5th Parachute
Division into the front as soon as they arrived from
Brittany. The 30th Infantry Division severely mauled the
14th Parachute Regiment. The German Seventh Army report
stated that the battle "confirms our experience that newly
committed troops which have not yet developed teamwork and
are thrown into heavy battle without having been broken in,
suffer disproportionately heavy losses."83 American
commanders would undoubtedly have agreed with this
statement, but the fact remains that the German Seventh Army
had the same troubles with its inexperienced units as the
First U.S. Army was having with its inexperienced divisions.
Further east, the 29th Infantry Division took the crucial town of St-Lo on 18 July. Task Force C (named after its commander, General Cota) and the 1/115th Infantry entered St. Lo in the afternoon, 43 days after D-Day. The 1/115th Infantry was down to 450 men when it seized St. Lo on 18 July, approximately at 50 percent strength; the three rifle companies resembled reinforced platoons more than anything else. Later its commander, Colonel Glover S. Johns, remarked, "The town was being held by the artillery, really, as the infantrymen were little more than guards for the observation posts." Repeatedly, the artillery broke up German counterattacks that threatened to overwhelm the battered, but indestructible, "Clay Pigeons of St. Lo." The doctrine of immediate counterattack was costly to German forces when facing American units with strong artillery support. "Even the best and most proven tactics still require judgement and the force to do the job," Colonel Johns noted, adding, "The Germans rarely had enough of either." On 20 July a battalion from the 134th Infantry Regiment, 35th Infantry Division, relieved the 1/115th Inf in place. St. Lo was finally secure, and General Bradley could begin final preparations for Operation COBRA, the operation designed to allow the First U.S. Army to break out of Normandy.
The battle of the hedgerows had lasted two weeks, but its result determined the outcome of the Normandy campaign. The advance was a slow, painstaking crawl through the worst of the bocage. Losses on both sides were heavy. Battle casualties during July 1944 totalled 4,773 men in the 9th Infantry Division, 4,718 men in the 29th Infantry Division, and 4,421 men in the 30th Infantry Division. Since most of these losses were infantrymen, the infantry regiments in these divisions lost between 50 and 75 percent of their strength during this month. The American historians relate the impact these losses had on their units:

For most of the American soldiers, it had been a thankless, miserable, disheartening battle. It was, perhaps, particularly hard on fresh divisions, coming into their first action with the zest and high morale born of long training and of confidence in their unit. Many units were—or felt they were—wrecked by the losses that hit them in the course of a few days' fighting, wiping out key men...The close ties within a unit, built up by long association, were broken irreparably; new officers and new men had to be assimilated in the midst of battle, sometimes on a wholesale scale. Yet the shock was met and surmounted; units that lost 30 percent of strength or more in a week, were kept in line and went on fighting.

Far from being the incompetent organizations that some historians portray, American infantry divisions were tough, resilient, and capable of accomplishing their missions under the worst of battlefield conditions. The battle of the hedgerows also showed the ability of the American administration and logistical systems to keep American divisions functioning, even under severe strain.
In turn, American infantry divisions decimated some of the best units in the German armed forces, to include the 2d SS Panzer Division (Das Reich), the 17th SS Panzergrenadier Division, the Panzer Lehr Division, and the 3d and 5th Parachute Divisions. American infantry divisions attacked these units until they could no longer hold their front without reinforcements, but no reinforcements came. The unintended strategy of attrition was every bit as effective as Grant's 1864 campaign in Virginia and more successful than the Meuse-Argonne offensive in World War I. The use of superior numbers to bludgeon an enemy to death is historically part of the American way of war. In Normandy, however, American infantry divisions were also qualitatively equal or superior to the German divisions which they faced.

The battle of the hedgerows was bloody and bitter, but the First U.S. Army now had its jump-off positions for Operation COBRA, leaving the marshes and rivers of the Normandy coast behind. More importantly, the German Seventh Army had used its last reserves in the front line, while the prolonged American attack had shattered many enemy formations beyond repair. COBRA would first stretch the enemy front, then break it wide open.


3. Ibid., 302.


6. In a typical comment regarding the air and naval fire support on OMAHA Beach, Lieutenant Colonel Herbert C. Hicks, Jr., commander of the 2/16th Infantry, stated, "It is felt that too much confidence and weight was put on what the supporting fires were going to do. Supporting fires were of absolutely no consequence on Omaha Red Beach. The Air Corps might just as well have stayed home in bed for all the good that their bombing concentration did. There were no indications of any bombs hitting closer than fifteen hundred yards to any of the strongpoints, and there were indications of the greater quantity of them falling four thousand yards inland. It is not understood why the naval support plan could not have been more effective." HQ, 2/16th Infantry, "Comments and Criticisms on Operation Neptune," 29 June 1944, pp. 3-4, File 301-INF(16)-3.01, Box 5927, Record Group 407, National Archives, MMRB.


8. HQ, CT 16, "Comments and Criticisms of Operations 'FOX', 'FABIUS I', and 'NEPTUNE'," 30 June 1944, p. 3, File 301-INF(16)-3.01, Box 5927, Record Group 407, National Archives, MMRB.


10. 29th Infantry Division, "Battle Lessons and Conclusions," After Action Report, June 1944, 1, File 329-0.3, Box 8623, Record Group 407, National Archives, MMRB.

11. Harrison, Cross-Channel Attack, 313.


15. HQ, CT 16, "Invasion of France," 1944, p. 20, File 301-INF(16)-0, Box 5907, Record Group 407, National Archives, MMRB.

16. "16-E on D Day," File CI-1, Box 24011, Record Group 407, National Archives, MMRB. Both Lieutenant Spaulding and Technical Sergeant Streczyk received the Distinguished Service Cross for their exploits.


20. Ibid., 156-57.


22. Roland G. Ruppenthal, *Utah Beach to Cherbourg* (Washington: Historical Division, Department of the Army, 1947), 45-47.

23. Ibid., 55.


25. Roosevelt died of a heart attack in his sleep on 12 July 1944. Bradley and Eisenhower had decided to make him a division commander shortly before his death, but had not informed Roosevelt of their decision before he died. The Army later awarded Roosevelt a posthumous Medal of Honor for exceptional gallantry on D-Day.


27. Ibid., 145.
28. Ibid., 149.


30. Ruppenthal, Utah Beach to Cherbourg, 129-30; Taylor, Omaha Beachhead, 19.


32. Ruppenthal, Utah Beach to Cherbourg, 131; Taylor, Omaha Beachhead, 19.


35. Ruppenthal, Utah Beach to Cherbourg, 126-27.


37. Harrison, Cross-Channel Attack, 403.

38. Ruppenthal, Utah Beach to Cherbourg, 141-43.


40. Ibid., 9-18.

41. Quoted in Joseph B. Mittelman, Hold Fast! (Munich: F. Bruckmann, 1946) 44.

42. Bradley, A Soldier's Story, 297.


45. Ibid., 148-49.
46. Ibid., 149.

47. Depuy, Oral History, Section I:22.

48. Ibid., Section I:32.

49. Colby, War from the Ground Up, 152.


51. Colby, War from the Ground Up, 159.


54. Ibid., IV-25.

55. Ibid., II-8.

56. Ibid., II-10.


58. Handbook on German Military Forces, VII-8; Balkoski, Beyond the Beachhead, 99.

59. Balkoski, Beyond the Beachhead, 102.

60. Greenfield et al., The Organization of Ground Combat Troops, 275.


66. Ibid., 4-5.

67. Ibid., 8.

68. Ibid., 5.


74. Ibid., 71.

75. See the respective after-action reports of each division in Files 301-3, 303-0.3, 309-0.3, and 329-0.3, Record Group 407, National Archives, MMRB.

76. HQ, 9th Infantry Division, "Report of Operations, 1-31 July 1944," 1 August 1944, 4, File 309-0.3, Box 7326, Record Group 407, National Archives, MMRB.


78. Ibid., 55-57.

79. Ibid., 59.

80. Ibid., 80.


82. Gerhardt, unpublished memoirs, 49.

83. Garth and Taylor, *St. Lo*, 100.

85. Ibid., 175.

86. Figures obtained from the after-action reports of the respective divisions in File 309-0.3, File 329-0.3, and File 330-1, Record Group 407, National Archives, MMRB.

CHAPTER VII

BREAKOUT AND PURSUIT: MANEUVER VERSUS FIREPOWER

The Army of the United States was the most mobile army in the world in 1944, but American commanders had yet to prove whether they could translate the inherent ability of American units to move into effective maneuver on the battlefield. Current proponents of "maneuver warfare" do not believe the United States Army has ever maneuvered effectively, at least in their narrow definition of that term.1 Certainly the Allies failed to complete their great victory in Normandy with a classic kesselschlacht (battle of encirclement) of the German army. Nevertheless, American operations in Normandy were devastatingly effective in reducing the vaunted Wehrmacht to a shambles in a little over two months of fighting. For an army that supposedly could not maneuver well, the breakout from Normandy, the exploitation to the Seine River, and the pursuit across France were exceptional operations. Senior leaders may have lost an opportunity to end the war in 1944 by failing to close the Falaise Gap when they had the opportunity to do so, but they made their mistakes at the operational, not tactical, level of war. Allied firepower and the tactical
abilities of allied divisions created the conditions for subsequent mobile operations. American units proved their capability to move fast and strike hard in the exploitation of Operation COBRA, the battle of the Mons Pocket, and the invasion of southern France.

Maneuver warfare enthusiasts talk about "surfaces," areas where the enemy is present in strength, and "gaps," areas where he is not. They obviously prefer striking through gaps and avoiding surfaces. In Normandy, there were no gaps; the First U.S. Army had to create one through the use of mass and firepower. As the Germans later found out at Mortain and in the Battle of the Bulge, the ability to maneuver does not automatically translate into victory. In both cases, German maneuver foundered on the rocks of American firepower. Combat effectiveness is much more than the ability to maneuver well. German failures in intelligence, logistics, airpower, and fire support resulted in their defeat on the battlefield on numerous occasions. Operation COBRA and the battle of the Falaise Gap was a convincing victory. So was the destruction of Army Group Center by the Red Army in Operation BAGRATION, which took place concurrently. Taken together, these operations show the limited combat effectiveness of the Wehrmacht, despite its tactical prowess and ability to maneuver.

Except for the attack across the Cotentin Peninsula by the 9th Infantry Division and 82d Airborne Division,
American operations in Normandy prior to Operation COBRA were unimaginative frontal attacks. These attacks were born of necessity, for until the 29th Infantry Division seized St. Lo, the First U.S. Army lacked the maneuver space and road networks necessary to mass its forces. With St. Lo in American hands, Lieutenant General Omar N. Bradley could concentrate his forces in an attempt to penetrate the German lines on a narrow front. To do this, he assigned three of his best infantry divisions—the 4th, 9th, and 30th Infantry Divisions—to his best corps commander, Major General J. Lawton Collins of VII(US) Corps. The First U.S. Army ensured that VII Corps massed its forces by giving it a narrow zone for its attack, less than five miles across at the line of departure. To open a hole in the German front, General Bradley requested the use of the heavy bombers of the American Eighth Air Force. The concept was for the bombers to "carpet bomb" the German front lines, through which the infantry divisions could then penetrate. Once the infantry divisions created a gap, the 2d Armored Division, 3d Armored Division, and the 1st Infantry Division, fully motorized for the operation, would exploit the penetration to the south and west (Figure 38).²

By the commencement of Operation COBRA, the First U.S. Army had largely solved the problems of attacking through the hedgerows. Small, combined arms formations formed the basis for the new assault organization.³ To operate
FIGURE 38
OPERATION COBRA

effectively together, infantry, armor, and engineer units had to train together during lulls in combat. Such training should have taken place in the United States and Great Britain prior to D-Day, but infantry-tank training was almost uniformly abysmal prior to the Normandy invasion.\(^4\) Regardless of the doctrinal strictures of FM 17-36, *Employment of Tanks with Infantry*, many infantrymen were simply ignorant of the capabilities and limitations of tanks. Part of the problem was a shortage of independent tank battalions. There were not enough to assign one to each infantry division on a habitual basis for training. Tanks were critical to the success of the infantry in fighting through the tough hedgerows of Normandy, but the infantry and tanks had to form cohesive teams before they could act effectively together.

In combat, tanks suppressed enemy infantry with high explosive and machine gun fire while the infantry protected the tanks from enemy antitank guns and other antitank weapons such as *panzerfausts*. Progress through the bocage was slow, units fought engagements at short range, and the use of massed armor formations in accordance with doctrine was impractical. Infantrymen and tankers paid the price in blood while the First U.S. Army adjusted its tactics and training to fit the situation on the battlefield. By the end of July 1944, infantry-tank cooperation had improved as a result of new training and experience gained in combat.\(^5\)
Part of the problem with combined arms cooperation was the lack of a good communications system among the arms. Radios in armor, infantry, engineer, artillery, and tank destroyer units were not identical and rarely compatible. Combat in the bocage worsened this situation since it required the formation of small teams, such as a platoon of infantry supported by a squad of engineers and a section of tanks. The infantry platoon leader could not talk to the tanks on his SCR (Signal Corps Radio)-300 radio, and if the tanks were equipped with only SCR-538 receivers, the tankers could not talk with anyone. To overcome this situation, the troops in the field improvised. Armor units borrowed SCR-300 radios and operated them with the antenna sticking out of the tank hatch. Some armor battalions sent radios to the supported infantry unit that could communicate with the SCR-508 and SCR-528 radios used by command tanks. The most common solution was to establish wire communications to the outside of the tanks through externally mounted handsets connected to the intercom system of the tank.\(^6\)

In the long term, the Army developed the AN/VRC-3 radio for installation in American tanks; this radio was a vehicular version of the SCR-300 radio carried by the infantry. The AN/VRC-3 became available in September 1944, and by mid-December the Army had equipped all M4 Sherman tanks in separate tank battalions with the new radio.\(^7\)
Terrain posed another problem for Sherman crewmen. Tanks could not negotiate the walls of hedgerows without exposing the vulnerable underside of their hulls as they climbed the embankments. The Germans covered gaps in the hedges with mines and antitank weapons. American tankers had to find a way to break through the hedges, and devised several means to accomplish this task. One method was for engineers to blast a hole in the hedge; a tank fitted with a dozer blade could then clear the dirt and vegetation out of the way and drive through the resulting gap.\(^8\) Due to the shortage of dozer tanks in First U.S. Army, however, this technique had limited value. Sergeant Curtis G. Culin of the 102d Cavalry Reconnaissance Squadron developed another and more widely applicable solution. He had steel teeth welded to the front of his tank, an improvisation similar to that devised by the 747th Tank Battalion, which supported the 29th Infantry Division.\(^9\) When the teeth dug into an embankment, the power of the engine would force the tank through and create a gap in the hedgerow. General Bradley had over 500 of the devices installed on American tanks for use during Operation COBRA. The "Rhinoceros" attachment, as the device became known, was a huge success in combat, and the Army decorated Sergeant Culin with the Legion of Merit for his innovation.\(^{10}\)

The greatest advantage the Allies possessed over the Wehrmacht in the West was air superiority. American
divisions developed close bonds with their tactical air support in France, due in large measure to the efforts of Major General Elwood R. Quesada, commander of the IX Tactical Air Command. Air-ground cooperation was a key to the success of the spearheads during Operation COBRA. A flight of four fighter-bombers flew ahead of each column. A qualified pilot rode with the column in a Sherman tank modified with SCR-522 VHF radios for ground-air communications. The planes gave excellent reconnaissance information and immediate close air support (CAS). With this support, the column could move farther and faster. By fall 1944 the ground forces received CAS almost as quickly and efficiently as artillery fire. Units used CAS to destroy difficult targets, such as enemy tanks. The American army in France came to rely on CAS to the point that the lack of air support during poor weather severely curtailed the pace of the advance.

The close cooperation between First U.S. Army and its tactical air support did not carry over to its relations with the heavy bombers. COBRA was to begin with a massive bombardment by over 1,500 B-17 Flying Fortresses and B-24 Liberators, but misunderstandings caused problems from the very beginning of the operation. General Bradley wanted the bombers to fly parallel to the line-of-departure along the St. Lo-Periers road to increase the accuracy of the bombing, but the air planners decided on a perpendicular approach,
which would allow for a quicker bombing but increased the likelihood of bombs being dropped short of the target on the heads of friendly troops. Unfortunately, the air planners failed to convey their decision to First U.S. Army. When the attack commenced and the bombers came in perpendicular to the front line, Bradley was furious, but there was little he could do to change the plan.\textsuperscript{13}

VII Corps scheduled COBRA to begin at 1300 hours on 24 July, but poor weather forced a twenty-four hour postponement at the last minute. Word of the delay did not reach all of the aircraft then streaming towards the target area. Over 300 bombers released their loads before the recall message reached them, and some of the bombs fell short of the target.\textsuperscript{14} Even though the commanders had pulled their soldiers back 1200 yards to the north of the St. Lo-Periers road to prevent casualties, some bombs fell among units of the 30th Infantry Division, which suffered 24 killed and 128 wounded from the attack.\textsuperscript{15}

The next day brought better weather if not better accuracy. When the aircraft returned at 1100 hours on 25 July, they hit not only the 30th Infantry Division again, but the 4th and 9th Infantry Divisions as well. The bombing killed Lieutenant General Lesley J. McNair, commander of Army Ground Forces, who was observing the operation as the commander of the fictitious 1st U.S. Army Group. Total casualties reached 111 killed and 490 wounded.\textsuperscript{16} General
William K. Harrison, Jr., Assistant Division Commander of the 30th Infantry Division, recalls, "I went back to regimental headquarters in order to get hold of a radio and tell them to send the Air Force home, we could win the war without their help--I was so mad." The 30th Infantry Division developed the unenviable reputation as the most bombed division in the American army; soldiers of the division not so jokingly referred to the Eighth and Ninth Air Forces as the "Eighth and Ninth Luftwaffe."  

The short bombing caused casualties, confusion, and delay among American units taking part in the assault. In the 3d Battalion, 47th Infantry Regiment, 9th Infantry Division, bombs killed the entire command group with the exception of the battalion commander and executive officer. This caused Major General Manton S. Eddy to delay the attack of the 47th Infantry Regiment while he replaced its 3d Battalion with the 1st Battalion, 39th Infantry Regiment. Bombs fell on the 8th Infantry Regiment of the 4th Infantry Division and caused numerous casualties in the 119th and 120th Infantry Regiments of the 30th Infantry Division. The bombing also demoralized the soldiers, who took little comfort from the fact that the Germans had suffered far worse than their buddies.

In addition to the use of heavy bombers, First U.S. Army massed its firepower in support of the attack by giving control of nine heavy battalions (8 inch guns), five medium
battalions (155mm howitzers), and seven light battalions (105mm howitzers) of artillery to VII Corps. In addition to the nondivisional artillery, VII Corps also controlled the division artillery units of the 1st Infantry Division and the 2d and 3d Armored Divisions waiting in reserve to exploit the penetration.\textsuperscript{20} Added to the artillery of the assault divisions, the total fire support in VII Corps numbered an impressive 43 battalions of artillery amounting to over 500 tubes. Ammunition shortages had restricted the use of artillery in Normandy up to this point, but VII Corps received nearly 140,000 rounds of artillery ammunition for Operation COBRA.\textsuperscript{21}

The bombing and artillery fires devastated large portions of the Panzer Lehr Division positioned in the path of COBRA. Bombs and shells destroyed tanks and guns, turned the area into a lunar landscape, and decimated the defenders in the bombardment zone.\textsuperscript{22} Major General Fritz Bayerlein, commander of Panzer Lehr, had no way of controlling the battle; the bombardment cut wires leading to the front and demolished three battalion command posts. The ground attack broke through the remnants of the division. Two days later, Bayerlein walked away from the battlefield, alone. His division had virtually ceased to exist.\textsuperscript{23}

The ground attack by the 4th, 9th, and 30th Infantry Divisions ran into scattered resistance from the dazed survivors of the air bombardment and artillery preparation
fires. To the credit of the German soldiers, they kept fighting and put up stiff resistance in spots. Nevertheless, the mass and firepower used against them were too much for them to handle. The 9th Infantry Division advanced two miles to the south of the St. Lo-Periers road by nightfall and linked up with the 8th Infantry Regiment of the 4th Infantry Division near la Chapelle. The 30th Infantry Division made steady progress towards Hebecrevon and seized the town at midnight. Although the divisions had not reached their assigned objectives, they had pierced the German main line of resistance. Even though he lacked solid evidence that this was the case, General Collins, with an intuitive feel for the battlefield, sensed the time had come to release his reserves and exploit the penetration. German doctrine mandated immediate counterattacks against attacking enemy forces; when the Germans failed to do so on 25 July, Collins correctly surmised that the bombardment had disrupted their command and control network. The next day, the armor rolled.

The infantry divisions did their part to further the penetration in the next two days. The 30th Infantry Division advanced eight miles and seized positions along the Vire River to protect the eastern flank of the penetration. The 9th Infantry Division assisted the passage of the 1st Infantry Division and Combat Command B of the 3d Armored Division in its zone, then attacked to seize
objectives which sealed off the western flank of the penetration. The 4th Infantry Division drove straight south to deepen the penetration. The German reaction was too little and too late. "This thing has busted wide open," exclaimed Major General Leland Hobbs, commander of the 30th Infantry Division.

The Normandy campaign had entered a new phase of mobile warfare for which the American army was particularly well-suited. After the war Generalmajor von Buttlar, Chief of Army Operations in Oberkommando der Wehrmacht (OKW) Operations Staff, wrote:

The WFSt [OKW Operations Staff] entirely agreed with OB WEST [Oberkommando der West] that [mobile] operations are generally preferable to a rigid defense. In order to be able to conduct operations, however, the following are required: (1) troops whose organization, arms, equipment, and training fit them for mobile combat, and (2) an air force capable of giving troop movements—which are, of course, the essential element of an operation—sufficient protection to ensure their successful execution even by daylight.

Both prerequisites existed on the enemy side, but not with us...

In the light of the unalterable composition of the forces in the West, the WFSt feared that any attempt to carry out operations with these forces, in the face of the enemy superiority in mobility and in the air, could only lead, at best, to an organized flight which the greatest efforts of the command would be able to stem only with difficulty.

After the success of COBRA, the German army's great mistake—caused in large measure by the interference of Adolf Hitler in the battle—was to attempt to restore the situation in Normandy through maneuver instead of falling back to a more
defensible position along the Seine River. The result of this decision was the ill-fated counterattack at Mortain.

The success of COBRA and the subsequent exploitation of the breakthrough created the conditions for the activation of Lieutenant General George S. Patton's Third U.S. Army on 1 August. As VIII(U.S.) Corps moved into Brittany in accordance with the OVERLORD plan, its movement hinged on the city of Avranches on the coast. The entire Third U.S. Army and its logistics had to move through a corridor at Avranches less than twenty miles in width, protected on the east by the VII Corps. The German plan was to use the XLVII Panzer Corps (2d and 116th Panzer Divisions) and the I SS Panzer Corps (1st SS and 2d SS Panzer Divisions) to penetrate the American line and seize Avranches, thereby cutting off the Third U.S. Army in Brittany.³⁰ In reality, superior Allied intelligence ensured the German plan had no hope of success.

The British code-breaking success, code-named ULTRA, allowed the Allies access to nearly all German radio traffic encrypted through the Enigma machine by 1944.³¹ The information gained from ULTRA was so sensitive that it never traveled lower than army level. On 6 August, for instance, General Bradley, the 12th Army Group commander, and Major General Courtney Hodges, the First U.S. Army commander, knew of the impending German counterattack, but General Collins, whose VII Corps was in the path of the attack, did not.³²
To protect ULTRA, Bradley and Hodges had to prepare to meet the counterattack without making their moves too obvious. The easiest way to meet these twin goals was to mass tactical air power at the point of the attack. In addition, Bradley ensured that VII Corps would not lack ground troops. Within twenty-four hours after the Germans attacked, Collins had five infantry and two armored divisions under his command. These forces did not "materialize out of thin air," as the official historian, without knowledge of ULTRA, surmised. The information provided by ULTRA in August was "of unsurpassable quality," and enabled Allied commanders to anticipate German moves on the battlefield.

Even without ULTRA, the German counterattack would probably have failed. American commanders had other means of intelligence gathering at their disposal, such as air reconnaissance and radio intercept and direction finding. Reports from these means and from the front line itself quickly picked up the German armored divisions as they left their concealed assembly areas. Allied tactical air support was flexible enough at this stage of the war to react to any German moves quickly, with or without prior warning. The three outstanding units in the path of the advance, the 4th, 9th, and 30th Infantry Divisions, fought stubbornly against the attacking panzers. The 9th Infantry Division stopped the 116th Panzer Division in its
tracks. The 4th Infantry Division, in VII Corps reserve, placed units in blocking positions to contain the enemy breakthroughs that did occur and engaged enemy units with heavy artillery strikes.

The German attack hit the 30th Infantry Division the hardest (Figure 39). The 2d SS Panzer Division overran elements of the 120th Infantry Regiment in Mortain, but the 2d Battalion held the decisive terrain of Hill 317 east of the city until relieved by the 35th Infantry Division five days later. Although the Germans had captured the battalion command group in Mortain, the battalion fought on under the command of Captain Reynold C. Erichson. In its defense of Hill 317, 2/120th Infantry lost three hundred of the nearly seven hundred men in the battalion, but forward observers on the hill called in devastating artillery strikes on the enemy tank columns arrayed below them. The battalion earned a well-deserved Distinguished Unit Citation and each of its company commanders received the Distinguished Service Cross. General Collins called the defense of Hill 317 "one of the outstanding small-unit actions of World War II."

When daylight came on 7 August, American fighter bombers and ten squadrons of rocket-firing Typhoons from the Royal Air Force converged on Mortain to attack the enemy spearheads. American artillery units fired numerous missions on enemy formations, without regard to ammunition expenditures. The 2d and 3d Armored Divisions arrived
FIGURE 39

THE GERMAN COUNTERATTACK AT MORTAIN, 7 AUGUST 1944

Source: Martin Blumenson, Breakout and Pursuit (Washington: Office of the Chief of Military History, 1961), Map X.
on the battlefield; CCB of the 3d Armored Division attacked
the furthest penetration of the German 2d Panzer Division.
Although the battle raged for several days, the outcome from
this point on was never in doubt.

The German counterattack gave the Allies an opportunity
to surround and destroy the two German armies in Normandy.
The opportunity was, according to Bradley, one that "comes
to a commander not more than once in a century."41
American armor and infantry divisions, with their superb
mobility and firepower, were well-suited to the wide
envelopment necessary to accomplish the encirclement of the
German forces. The question remained whether the
operational abilities of the senior American commanders
could match the performance of their units in the campaign.

Unfortunately, they could not. In his revisionist
account of the Normandy campaign, Martin Blumenson
castigates General Bradley, along with General Dwight D.
Eisenhower and General Bernard L. Montgomery, for throwing
away the opportunity to destroy the German forces opposing
them and instead focusing their efforts on gaining ground.
As a result, the bulk of the German forces in Normandy
escaped the Allied trap, retreated in good order across the
Seine River, and were able to patch together another
defensive front as the Allied pursuit died out due to
logistical problems. "The miracle of the west," as the
Germans called it, should never have happened.42
The OVERLORD plan was in essence a logistical document. Once ashore, the Allied leadership floundered to devise an operational strategy to finish the campaign. Even after the success of Operation COBRA, Bradley felt compelled to disperse his combat power by sending VIII(US) Corps into Brittany to seize ports there. The emphasis on gaining and holding the OVERLORD lodgement area resulted in a lack of combat power at the decisive place and time—to close the Falaise Gap before the German army could escape. The poor performance of the Canadian and British armies in closing the gap from the north only exacerbated the problem. As a result, 50,000 German soldiers escaped the jaws of the trap at Falaise and 240,000 Germans escaped the potential trap across the Seine River. By any accounting, the Allied performance at the operational level of war was sorely lacking.43

At the tactical level, however, most American divisions performed well. The accomplishment of the 9th Infantry Division in the battle of the Falaise Gap highlights the mobility and firepower of the American infantry division in 1944. While the 39th Infantry Regiment defended its positions near Mortain on 7 August against attacks by the 116th Panzer Division, the remainder of the division continued to attack east to widen the Avranches corridor until the 28th Infantry Division passed to its front on 12 August. The next day, the 9th Infantry Division moved fifty
miles by truck to new positions on the southern face of the German pocket. On 14 August, the division attacked to the north in conjunction with the 3d Armored Division and for the next four days pounded German positions with concentrated firepower. On 17 August the division reported, "Numerous targets of all descriptions were available... 5829 rounds [of artillery ammunition expended]... Considerable destruction of enemy equipment... Streams of fighter-bombers attacked retreating enemy columns from 0500 until dark. Numerous fires from burning vehicles and tanks were observed in the target area." The flexibility and firepower of the American infantry division made such reports possible.

The German Seventh Army, Fifth Panzer Army, and Panzer Group Eberbach suffered heavily from Allied firepower in their escape from Normandy. "Never in history had artillery enjoyed such a field day," wrote the historians of the 90th Infantry Division. As many as 10,000 German soldiers perished in the Falaise Gap and the Allies took up to 50,000 prisoner. Nevertheless, substantial numbers escaped the Allied trap. Although Bradley put much of the blame on Montgomery's inability to close the gap from the north, he must share responsibility for the mistake. Bradley was slow to concentrate sufficient force to close the Falaise Gap from the south when he had the opportunity to do so. When V(U.S.) Corps finally attacked to close the gap on 18 August, its forces consisted of the French 2d Armored
Division (more interested in Paris than Falaise), the 80th Infantry Division (in combat for the first time), and the 90th Infantry Division (Figure 40). This effort was hardly on the scale of Operation COBRA; Bradley had diluted his combat power near Argentan by acceding to Patton's wishes for an immediate drive to the Seine River.48

The result was predictable. The 80th Infantry Division suffered the fate of many new divisions and barely got across its line of departure before the Germans halted it.49 The French 2d Armored Division was more interested in achieving French political goals than in closing the gap.50 The burden of the attack therefore fell on the revitalized 90th Infantry Division, now in the capable hands of Major General Raymond S. McLain.

The battle of the Falaise Gap was ironic justice for the "Tough 'Ombres." Their first battle in Normandy began with calls for the division's dissolution, but at the end of the campaign, they exacted a bloody revenge on their enemies. The 90th Infantry Division fought to join with Polish soldiers at Chambois and close the pocket on 19 August. As the German forces attempted to escape encirclement, the devastating effectiveness of the American infantry-artillery team once again became evident. General William E. Depuy later stated, "The artillery was good. It was just technically very sound, better than the Germans. It could mass quicker, and we had good communications. I
FIGURE 40
THE FALAISE GAP, 17-19 AUGUST 1944
think the technique, the command and control of fire direction...of the American Army were superior to the German Army."\textsuperscript{51} With eleven battalions of artillery at their disposal and an abundance of targets at hand, the forward observers of the division implored the fire direction centers to "stop computin', and start shooting."\textsuperscript{52}

In four days the 90th Infantry Division caused 8,000 enemy casualties and took 13,000 prisoners at a cost of 600 casualties. In the "valley of death" below the division's positions lay destroyed 220 enemy tanks, 160 self-propelled guns, 700 artillery pieces, 130 anti-aircraft guns, 130 half-track vehicles, 2,000 wagons, and 5,000 motor vehicles.\textsuperscript{53} Sadly, General McLain concluded, "If the Division had not been held back for over 24 hours in attack on Chambois the results would have undoubtedly been greater."\textsuperscript{54}

Despite this impressive tally, thousands of German soldiers withdrew through the porous line. The Germans lost much of their equipment in the escape, but were able to save as many as 50,000 soldiers to fight again another day.\textsuperscript{55} Although this accomplishment prolonged the war, after Normandy the decision in the West was never in doubt. The Wehrmacht lost 300,000 men defending Normandy and the Allies had rendered forty German divisions combat ineffective, an achievement in many ways comparable to the Soviet victory at Stalingrad a year and a half earlier.\textsuperscript{56} Eisenhower later
Eisenhower later called the Falaise Gap "one of the greatest killing grounds of any of the war areas," filled with scenes "that could be described only by Dante. It was literally possible to walk for hundreds of yards at a time, stepping on nothing but dead and decaying flesh."  

Hitler sacrificed another 200,000 men in defending self-proclaimed "fortresses" along the Biscayan and Channel coasts. General Bradley learned the cost of taking these ports when he committed the 2d, 8th, and 29th Infantry Divisions to a bloody battle for Brest from 25 August to 18 September. These three divisions took the city along with 38,000 prisoners at a cost of 9,831 casualties. The victory was Pyrrhic; the Germans had so thoroughly demolished the port facilities that the Americans never made any attempt to use them.

Freed from the battle for Normandy and with little organized resistance to the east, the American First and Third Armies pursued the fleeing enemy like a wind-swept tide. Excluding the airborne divisions, the only part of the American army without organic transportation were the infantry regiments of the standard infantry divisions. While the armored divisions raced across France, the infantry divisions kept pace behind through various means. Army commanders could completely motorize a standard infantry division through the attachment of six quartermaster truck companies with a total of 288
trucks.\(^5\) Since the armies needed most of their truck companies to haul gasoline and other supplies during the pursuit, however, infantry divisions had to use other methods. Most divisions shuttled their infantry regiments forward using organic supply vehicles or trucks belonging to division artillery units. Some divisions put their infantrymen on tanks and tank destroyers to speed the advance. Another method was obvious; when no transportation was available, the infantry simply marched forward on foot.

By this stage of the campaign, combined arms coordination, especially between tanks and infantry, was much improved. The 1st Infantry Division used battalion task forces in the pursuit, each force being a self-contained combat unit capable of overcoming most enemy resistance. A typical battalion task force might consist of an infantry battalion, a platoon of medium tanks, a platoon of light tanks, a platoon of tank destroyers, a platoon of towed anti-tank guns, an assault gun platoon, and a company of heavy mortars. Techniques of bounding overwatch, with infantry leading in close country and tanks leading in more open terrain, became routine. "The success of such operations," noted Lieutenant Colonel Clarence E. Beck, the division operations officer, "depends upon the attachment of tanks to the infantry units with which they are to fight in sufficient time to allow the tank crews and the infantry to arrive at solutions to their joint liaison and tactical
problems and to develop mutual understanding and confidence.""60 Not until after the war did the Army make tank battalions an organic part of the infantry division, thus eliminating the problem.

As long as the supplies of fuel lasted, the speed of the pursuit was nothing short of spectacular. The report of the 9th Infantry Division on 28 August stated, "Enemy disorganized and apparently wondering what it is all about."61 Indeed, the American army moved at a rate the bulk of the Wehrmacht, with its horse-drawn artillery and logistics, could only dream of matching. Only German panzer and panzergrenadier units could move as fast as American divisions, but by 1944 these organizations were a shadow of their former selves. Lack of fuel and Allied air interdiction hampered the movement of even the most mobile German units. Hans Speidel, chief of staff of Army Group B, recalls, "The events of the last weeks of August were like a raging torrent that nothing could stem...an orderly retreat had become impossible. The Allied motorized armies surrounded the slow and exhausted German divisions marching in separate groups, and smashed them. There was a jam of retreating German formations at Mons and considerable numbers were destroyed by the Allied armored units which overtook them."62 The First U.S. Army took 25,000 prisoners in the Mons Pocket, the remnants of twenty Germany divisions.63
The invasion of southern France by the Seventh U.S. Army on 15 August 1944 hastened the German collapse in the West. The VI(U.S.) Corps, under the capable leadership of Major General Lucian K. Truscott, which made the initial landings was an experienced combat organization. This was the fourth amphibious invasion for the veteran 3d Infantry Division, the third for the seasoned 45th Infantry Division, and the second for the 36th Infantry Division. Hard training and attention to lessons learned in previous operations contributed to the success of the landing. After Fifth U.S. Army withdrew VI Corps from combat in Italy in June, the 3d, 36th, and 45th Infantry Divisions had two months to integrate replacements and train for the upcoming invasion. The 3d Infantry Division stressed physical conditioning (especially speed marching), attack of fortifications, obstacle breaching, weapons firing, and infantry-tank cooperation. The training culminated in several landing exercises on beaches north of Naples.64

VI Corps put lessons from previous operations to good use. The invasion plan included the use of smoke to obscure the initial wave from enemy observation and the use of bulk-loaded landing craft and combat-loaded amphibious trucks to ensure quick resupply.65 Since VI Corps landed in daylight, planners decided to rely on firepower rather than surprise to achieve their objectives. Naval forces supported the 3d Infantry Division alone with one
battleship, six light cruisers, and five destroyers, along with smaller craft carrying guns or rockets. The warships executed a prearranged bombardment of known artillery positions for ninety minutes prior to H-hour, after which they took calls-for-fire from spotter planes and the nine shore fire control parties that landed in the first wave. The naval liaison officer at the division artillery headquarters had communications with all spotters and shore parties, which in effect created a naval fire direction center with the capability of massing the fire of all ships on a single target. The air forces, based mainly on Corsica or escort carriers, attacked targets in southern France for ten days prior to the invasion and gained air superiority over the area.66

As a result of the thorough preparations, air and naval gunfire support were more effective than on 6 June, and VI Corps put more infantry battalions ashore at H-hour than in the Normandy landing (Figure 41). The excellent plan, well-trained and combat experienced troops, and low quality of German opposition combined to make Operation ANVIL/DRAGOON one of the most successful amphibious invasions in history. VI Corps casualties on 15 August totalled only 95 killed and 385 wounded, and the corps carved out a solid beachhead east of Toulon.67

The VI Corps breakout from its beachhead and pursuit of the German Nineteenth Army up the Rhone Valley was as
SOUTHERN FRANCE

GULF OF THE LION

LIGURIAN SEA

FIGURE 41
OPERATION ANVIL
spectacular in terms of ground gained as the Allied breakout and pursuit from Normandy. Once again American artillery had a field day. Major Walter T. Kerwin, the 3d Infantry Division DIVARTY S-3, described the scene:

They [the Germans] had the [Rhone] river on their left, and the mountain line and us on the right, so that it was a turkey shoot...It was like at Fort Sill sitting up there in all your great glory, with nobody shooting at you, and looking out there on just masses and masses of people and being able to pick your target.68

Like at Falaise, however, the American forces were not able to seal the trap. The German Nineteenth Army largely escaped to fight again in Alsace, despite losing one-fifth of its strength in the bitterly contested battle of Montelimar as it withdrew north.69

Part of the reason for the failure to destroy the German forces was the emphasis that Lieutenant General Alexander M. Patch, the Seventh Army Commander, put on seizing the ports of Toulon and Marseille before conducting more aggressive operations against the German forces in the Rhone Valley.70 The II (French) Corps, under the command of the General Jean de Lattre de Tassigny, attacked to seize both cities by 28 August, four weeks earlier than expected. As Eisenhower believed when he argued with Prime Minister Winston Churchill over whether to launch ANVIL, these ports turned out to be crucial to maintaining Allied logistics in France. During the critical months of September through December 1944, over one-third of all supplies shipped to
France landed at Toulon or Marseille; not until March 1945 did Antwerp overtake the two southern ports in terms of tonnage unloaded.\textsuperscript{71}

In the pursuit across France, logistics was clearly the limiting factor. In the planning for OVERLORD, Supreme Headquarters Allied Expeditionary Forces (SHAEF) used phase lines to estimate the advance of Allied forces across France. The staff estimated the establishment of the lodgement area along the Seine River by D+90 and closure on the Rhine River by D+350. The operations staff was not as tied to the dates as the logistics staff, which used the timed phase lines to pace the progress of an orderly supply build-up on the Continent.\textsuperscript{72} Once the Allies secured the lodgement area, the logisticians assumed the armies would halt while the Communications Zone (COMZ) established a logistics base for a renewed advance across the Seine River.\textsuperscript{73} Since the operations staff assumed that the Germans would defend the Seine, thereby forcing the Allies into a deliberate river crossing operation, they accepted the assumption of an operational pause at the river to build-up forces.\textsuperscript{74}

The OVERLORD logistics plan assumed steady progress. The Allies were to reach Avranches by D+20, Le Mans by D+40, and the entire lodgement area to the Seine River by D+90 (Figure 42). In the event the Allies reached the Seine River at D+79, but the pace of the advance was hardly
FIGURE 42
PLANNED DEVELOPMENT OF THE LODGEMENT AREA

Source: Gordon A. Harrison, Cross-Channel Attack (Washington: Office of the Chief of Military History, 1951), Map IV.
uniform. Between D+49 and D+79 the Allies occupied ground which they planned on taking between D+15 and D+90. Between 25 August and 12 September, Allied forces advanced from the D+90 to the D+350 phase line. The engineers could not restore the railroads or build gas pipelines at the pace of the divisions rolling eastward. The Allies captured Paris on 25 August (fifty-five days ahead of schedule), burdening the overloaded supply system with an additional requirement of 1,500 tons per day for civil relief. Eisenhower’s decision on 23 August to carry the pursuit across the Seine stretched the logistics tail even further.

Until the Allies seized and repaired more ports, most supplies landed at either Cherbourg or across the beaches in Normandy. The transportation corps moved the supplies from these points across France to the advancing armies. Allied air forces had destroyed much of the French rail system to prevent German reinforcements from reaching Normandy, but now the Allies had to repair the damage before using the railroads to move supplies forward. Lack of forward airfields and diversion of transport aircraft for airborne operations limited the use of air resupply. Motor transport, therefore, carried the bulk of the supplies forward. There were a finite number of trucks on the Continent, however, and they simply could not carry the 22,200 tons of supplies required daily by the thirty-seven Allied divisions on the Continent at the end of August.
Eisenhower concluded that the logistics base as organized at the end of August 1944 could not support an Allied advance deep into Germany.⁷⁶

Through a number of expedients, the transportation corps was able to cope with the increased needs of the armies through the third week of August. Eisenhower's decision to pursue the retreating Germans across the Seine, however, forced COMZ to improvise on a greater scale. To move supplies forward into the Chartres-La Loupe-Dreux triangle, COMZ organized the Red Ball Express.⁷⁷ The Red Ball Express was a series of one-way, loop highways along which convoys would travel twenty-four hours per day. The system began operation on 25 August with 118 companies hauling supplies between the beaches and Chartres. On 6 September COMZ expanded the system. The routes diverged at Versailles, one branching northeast to support First U.S. Army at Soissons and another branching east to support Third U.S. Army at Sommesous. Although the plan for the Red Ball Express was a good one, execution fell short of expectations for several reasons: the shortage of military police to control the routes, the slow loading time for convoys, lack of vehicle maintenance, the "hijacking" of convoys by the armies to move supplies further forward to divisional dump sites, and the lack of a uniform system of traffic regulation.⁷⁸
Allied forces used other expedients as well. COMZ formed sixty-eight truck companies by immobilizing the 26th, 95th, and 104th Infantry Divisions, and diverting two engineer service regiments, a chemical smoke generating battalion, and assorted antiaircraft units into transportation duty. The armies also used their internal transport for line-of-communication hauling. On 22 August General Bradley ordered his armies to leave their heavy artillery west of the Seine and to use their trucks for cargo movement. The armies also diverted engineer, artillery, antiaircraft, ordnance, and chemical units to transport duties.79

Air supply averaged 600 tons per day from 19-25 August, but the needs of Paris and the proposed Tournai airborne operation reduced the amount of air supply to 12th Army Group. From 27 August to 2 September, air supply averaged only 250 tons per day. Although air deliveries increased to 1000 tons per day from 3-16 September, Operation MARKET-GARDEN seriously reduced aerial resupply to 12th Army Group from 17-29 September.80

The Red Ball Express and other expedient measures allowed the American armies to continue the pursuit into the middle of September, but at a high cost to both equipment and the COMZ infrastructure. Near continuous use of equipment resulted in its rapid deterioration.81 Major repairs of trucks rose from 2,500 in mid-September to 5,750
by the end of the month. The replacement figure for the 8-ply 750 X 20 tire rose from an average of 29,142 per month from June through August to 55,059 in September, resulting in a shortfall of 40,000 tires by mid-month. Stockage of spare parts, tires, and tools neared exhaustion. Extreme fatigue of drivers sent accident rates soaring. By the end of August 90-95 percent of all Allied supplies in France were located near the beaches in Normandy. COMZ used all transportation assets to haul supplies to the army dumps; they could spare none to establish forward depots closer to the front.

Given the almost complete collapse of the German army in France in August 1944, Eisenhower's decision to pursue as far as possible was worth the resulting cost to the logistical system. By the middle of September, however, the supply system deteriorated to the point that the pursuit had to end. After the first few days of intense fighting at the Moselle River, Aachen, and in Holland in mid-September, the Allied armies quickly exhausted their ammunition stocks. They could hardly launch a major offensive on the basis of receiving ammunition on the same day they fired it. The U.S. Army official history states:

The Communications Zone had undergone a sort of forced growth at the sacrifice of a sound administrative structure, and at the end of September logistic difficulties presented certain imperatives which could no longer be ignored...The shortages experienced during the pursuit had provided only a foretaste of the real difficulties to come. For the next two months supply
limitations were to dominate operational plans, and the Allies were now to learn the real meaning of the tyranny of logistics.84

One must conclude that the Allies could not have supported an advance into Germany in September 1944 with their jerry-rigged supply system based primarily on the beaches in Normandy.85 Friction would have thwarted the attempt.

The failure of Operation MARKET-GARDEN, the Allied ground-airborne operation designed to seize a bridgehead over the Rhine River at Arnhem, and the resurgence of German strength in the West brought the Allied pursuit to an end in September. German strength increased everywhere on the Western Front by the end of the month. The German staffs and headquarters that escaped the debacle in Normandy collected the remnants of broken formations, new replacements, and assorted reinforcements, and molded them into kampfgruppen capable of effective resistance. Hitler transferred two panzergrenadier divisions from Italy to the Moselle, where they opposed Patton's advance. Shortened lines of communication eased the task of replenishing supplies and moving replacements and reinforcements forward. The first "volksgrenadier" divisions began to appear on the front. By early September, ten new panzer brigades, rehabilitated fragments of units from the Eastern Front, were ready for deployment. More of the tanks coming out of German factories were Panthers and Tigers, giving the German armored forces a qualitative edge in the upcoming battles.
The Germans labeled the resurrection of their army in Holland, Belgium, and France in September 1944 "the miracle of the west," an apt description for what must have been a chaotic phenomenon.86

The Allied logistical apparatus and combat forces suffered enormous attrition during the breakout and pursuit operations in August and September 1944. When the armies came into contact with the refurbished German forces on the Moselle, West Wall, and in Holland, the Allies quickly exhausted their ammunition supplies. Until Field Marshal Montgomery's 21st Army Group could open the Scheldt Estuary to allow ships to dock at Antwerp, Allied divisions would lead a hand-to-mouth existence. The combination of supply shortages and the worsening fall weather, which often grounded air support, did not bode well for the use of firepower upon which Allied divisions depended.

In analyzing the combat effectiveness of the Army of the United States during the breakout from Normandy and the pursuit of German forces across France in 1944, one must assess the contribution of the American logistical system to the campaign. Historian Martin van Creveld argues that the American logistical system was bloated and American forces could have produced the same results with less waste and inefficiency, thereby allowing the Army to use more of its assets in combat or combat support roles.87 A more recent examination of American logistics in France by Steve Waddell
concludes that although COMZ could have performed better, American forces received the level of supplies that their national character demanded. Even though American forces occasionally faced shortages, these were minor compared to those suffered by the Wehrmacht. When they had to do without, American units successfully improvised to meet their immediate needs. Although there were certainly excesses in the COMZ, the logistical tail of the Army of the United States was a necessary component of American combat effectiveness.
ENDNOTES


15. HQ, 30th Infantry Division, *After Battle Report, 1-31 July 1944*, 19, File 330-3, Box 8788, National Archives, MMRB.


18. Ibid., 329.


20. Ibid., 219-220.

21. Ibid., 219.


24. HQ, 9th Infantry Division, "Report of Operations, 1-31 July 1944," 1 August 1944, p. 12, File 309-0.3, Box 7326, National Archives, MMRB.


26. HQ, 30th Infantry Division, "After Battle Report, 1 July 1944-31 July 1944," p. 21, File 330-3, Box 8788, National Archives, MMRB.


34. Bennett, Ultra in the West, 119.

35. Blumenson, Breakout and Pursuit, 467.

36. HQ, 9th Infantry Division, "Report of Operations, 1-31 August 1944," 1 September 1944, pp. 5-6, File 309-0.3, Box 7326, Record Group 407, National Archives, MMRB.

37. Blumenson, Breakout and Pursuit, 471.

38. Collins, Lightning Joe, 255.


40. Blumenson, Breakout and Pursuit, 474.

41. Bradley, A Soldier's Story, 375.


43. Ibid.

44. HQ, 9th Infantry Division, "Report of Operations, 1-31 August 1944," 1 September 1944, p. 10, File 309-0.3, Box 7326, National Archives, MMRB.


47. Bradley, A Soldier's Story, 377.
48. Ibid., 379.


52. History of the 90th Division, 23.

53. HQ, 90th Infantry Division, "Report of Operations, August 1944," 3 October 1944, p. 11, File 390-0.3, Box 13279, Record Group 407, National Archives, MMRB.

54. Ibid.


58. Blumenson, Breakout and Pursuit, 653.


60. HQ, 1st Infantry Division, "G-3 Report of Operations, 1-31 August 1944," 10 September 1944, p. 65, File 301-3, Box 5761, Record Group 407, National Archives, MMRB.


63. Blumenson, Breakout and Pursuit, 684.

64. HQ, 3d Infantry Division, "Report of Operations, 15-31 August 1944," 19 September 1944, pp. 1-3, File 303-0.3, Box 6106, Record Group 407, National Archives, MMRB.

65. Ibid., 4-5; HQ, Eighth Amphibious Force, Training Plan 1-44, 28 June 1944, File 303-3.13, Box 6247, Record Group 407, National Archives, MMRB.


69. Clarke and Smith, Riviera to the Rhine, 168.

70. Ibid., 137.

71. Ibid., 576, Table 1.


73. Ibid., 189.

74. Eisenhower, Crusade in Europe, 291.


76. Eisenhower, Crusade in Europe, 290.

77. Ruppenthal, Logistical Support of the Armies, 558-59.

78. Ibid., 564-68.

79. Ibid., 570.

80. Ibid., 576-81.


82. Ruppenthal, Logistical Support of the Armies, 571.

83. Ibid., 491.

84. Ibid., 583.

85. Historian Martin Van Creveld disagrees. His figures, based on the number of truck companies available to the Allies in September 1944, do not take into account the tremendous attrition of the trucks and the supply


CHAPTER VIII
SUSTAINING THE FORCE: THE SIEGFRIED LINE AND LORRAINE CAMPAIGNS

As the Allied offensive reached its culminating point in the fall of 1944, American infantry divisions found themselves broiled in bitter battles for Aachen, the Huertgen Forest, Alsace, and Lorraine. By the end of September 1944, there were twenty-three American infantry divisions in the European Theater of Operations, fifteen of which had gained significant combat experience in Italy, Normandy, or southern France.¹ By the end of the year twelve more infantry divisions had arrived in France.² The challenge for the inexperienced divisions was to adapt to the battlefield against combat-experienced enemy forces which occupied strong defensive positions near their homeland. The vast majority of American infantry divisions met this challenge. The divisions which had been in combat since the early summer had to find ways to maintain their effectiveness during long periods of combat even while sustaining high casualties. Constant employment at the front caused an increase in combat stress and non-battle casualties, especially when the weather turned rainy and
cold. Bad weather also negated the huge Allied advantage of air supremacy, while supply shortages caused by the failure to open Antwerp in a timely manner reduced the availability of artillery ammunition on which American divisions relied so heavily. In the fall and winter of 1944, American infantry divisions improvised to accomplish their missions while personnel managers and logisticians worked to sustain the force. Both efforts were crucial to ultimate victory.

The battles of Aachen and the Huertgen Forest typify both the successes and failures and American infantry divisions to adapt to combat and sustain their effectiveness during the fall of 1944. Aachen, birthplace of Charlemagne and for many centuries the capital of the Holy Roman Empire, held a prominent place in National Socialist ideology and therefore was an important objective for the First U.S. Army as it crossed the German border. The mission of seizing Aachen would fall to Major General J. Lawton Collins' VII Corps, which would attack the city from the south and west. Major General Charles H. Corlett's XIX Corps would assist in the operation by encircling Aachen from the north and linking up with VII Corps east of the city.

Collins and Corlett tasked their most experienced divisions—the 1st and 30th Infantry Divisions—with the encirclement of Aachen. The initial attempt by VII Corps to take Aachen in September failed due to shortages of gasoline and artillery ammunition, poor weather that grounded close
air support, exhaustion of American forces which had just finished a long pursuit, and defensive advantages the Germans gained from the West Wall fortifications. The West Wall, or Siegfried Line as many Allied soldiers called it, was a belt of fortifications that stretched from Switzerland to a point north of Aachen. The fortifications averaged a depth of three miles and included hundreds of pillboxes, observation and command posts, and thousands of obstacles to include barbed wire, minefields, and "dragon's teeth" anti-tank obstacles. What the German army in September 1944 lacked in the way of quantity and quality of its troops, it made up for by the strength of its defensive positions.

A two week lull in the battle ensued as the American divisions prepared for another effort. The 30th Infantry Division made elaborate preparations for its attack. Battalions rotated out of the line to train on sand tables and mock-ups of the assault area. Infantry units practiced combined-arms techniques for breaching obstacles and assaulting pill boxes, much in the same manner as they had re-trained to assault the hedgerows of Normandy three months earlier. Twenty-six artillery battalions formed the basis of an impressive fire support plan for the attack. Planners also requested the use of heavy and medium bombers to pummel German fortified positions in the West Wall prior to the infantry assault, although in the event only 360 medium
bombers and 72 fighter bombers were available for the bombardment.\textsuperscript{6}

On 2 October, the offensive resumed with a deliberate attack on a narrow front by the 30th Infantry Division. The results of the air bombardment were poor, so Corlett decided to release the corps' contingency stocks of artillery ammunition to support the attack. Within twelve hours the artillery had fired over eighteen thousand rounds.\textsuperscript{7} The fires did not destroy the West Wall fortifications, but suppressed the defenders long enough to allow the infantry to close with the enemy manning them. The 117th and 119th Infantry Regiments did not penetrate far into German lines, but the dent was large enough for Corlett to commit the 2d Armored Division to the battle the next day. Enemy artillery slowed the commitment of the armor and took its toll of the attackers; one American artillery commander "hazarded a guess that the Germans had finally found a copy of the American field artillery manual telling how to mass their fires."\textsuperscript{8} After beating off several counterattacks in the next few days, the 30th Infantry Division made good progress to the south. By 7 October, Major General Leland Hobbs could report that his division was through the West Wall. "We have a hole in this thing big enough to drive two divisions through," Hobbs told Corlett.\textsuperscript{9}

The critical task was now to encircle Aachen through a link-up of XIX Corps and VII Corps east of the city (Figure
43). On 8 October, Major General Clarence Huebner's 1st Infantry Division joined the offensive by attacking from its positions in the Stolberg Corridor south and east of Aachen. Like the units of the 30th Infantry Division, the Big Red One conducted training in pillbox reduction techniques prior to the attack. The 18th Infantry Regiment, which would make the main attack, also gained surprise by attacking under cover of darkness. Within forty-eight hours, the 18th Infantry had taken its three objectives with only light casualties.10

Although the initial attacks had gone well, much hard fighting remained before the American divisions could isolate Aachen. The Germans launched several strong counterattacks which the 1st Infantry Division repulsed with some difficulty.11 The First U.S. Army commander, Lieutenant General Courtney H. Hodges, encouraged Corlett to relieve Hobbs of his command if he could not get the 30th Infantry Division to close the gap soon.12 Hodges need not have worried. One day after his conversation with Corlett, the 30th and 1st Infantry Divisions linked-up east of Aachen. Five days later, 21 October 1944, the Germans in the city surrendered to the 1st Infantry Division.

Hodges had unfairly jumped to conclusions about the performance of the 30th Infantry Division in the Siegfried Line campaign. After the end of the war, the War Department would award the division with a Distinguished Unit Citation
ENCIRCLEMENT OF AACHEN
7-20 October 1944

Axis of main U.S. attack
American position, night 20 Oct
German line, morning 7 Oct
German M.L.R., night 20 Oct

1. Louberg 2. Salvoberg 3. Farnick Park

Elevations in meters

FIGURE 43
ENCIRCLEMENT OF AACHEN

for its performance in the breaching of the Siegfried Line.

In his endorsement of the unit citation recommendation, the Theater Historian, Colonel S.L.A. Marshall, rated the 30th Infantry Division as one of the best in the European Theater of Operations:

In its tactical planning and execution as well as in its ability to meet and combat unforeseen contingencies, superior initiative, courage and tenacity were displayed at all levels of the Division... at every stage of operation this division performed with any who were associated with it either in equal or superior manner... [the 30th Infantry Division displayed] always steady and not infrequently brilliant performance, conservative of its own force and fully hurtful to the enemy. 13

The 1st Infantry Division also received a Distinguished Unit Citation for its performance at Aachen. Together, these two veteran infantry divisions formed a formidable team.

The capture of Aachen was a significant victory for the First U.S. Army. Together, the 1st and 30th Infantry Divisions took nearly twelve thousand prisoners during the battle. 14 German commanders committed valuable forces to futile counterattacks to relieve the city; their destruction weakened the German defense along the next major obstacle, the Roer River. American commanders showed good ability to maneuver to avoid the strength of the German defenses, as the report of the 1st Infantry Division attests:

It is felt that the success of this operation was due to the fact that the enemy in the first place had expected the Division to attack the town prior to the attack on the main SIEGFRIED Line itself; most of the defenses on the town were concentrated to the south and after fixing them with artillery,
mortar and aerial bombardment, the enemy flank was turned from the east and north from a position which he had least expected the attack to come.15

Ironically, the First U.S. Army would ignore this lesson in its very next battle—the struggle for the Huertgen Forest.

The Battle of the Huertgen Forest was a miserable blunder. Lieutenant General James M. Gavin, whose 82d Airborne Division occupied the area well after the battle was over, called it "our Passchendaele."16 Ernest Hemingway went one step further by dubbing it "Passchendaele with tree bursts."17 To the north of the Huertgen Forest lay the Stolberg corridor and Aachen. The Roer River framed its eastern and southern boundaries. Inside these limits lay an area of dense pine forest, steep hills, and deep gorges. The terrain had no intrinsic value except for the dams along the Roer River that lay beyond it (Figure 44). Possession of these dams was necessary to prevent the Germans from flooding the areas downstream (to the north) as the Allied forces advanced further into Germany.

Incredibly, neither the Germans nor the Americans understood the critical nature of the dams until well into the battle.18 As units of VII Corps neared the German border in September 1944, possession of the west bank of the Roer River seemed reason enough to attack through the Huertgen Forest.

The 9th Infantry Division, under the command of Major General Louis A. Craig, was the first major American combat
FIGURE 44

THE ROER RIVER DAMS

unit to enter the forest. After the pursuit across France, the 9th Infantry Division ran into the fortifications of the West Wall on 14 September in the vicinity of Lammersdorf and Monschau. The 39th Infantry Regiment penetrated the first belt of German fortifications near Lammersdorf after a difficult, three-day battle, but could advance no further. The VII Corps commander, General Collins, redirected the 9th Infantry Division further north to attack through the Huertgen Forest and seize Huertgen and Kleinhaus, six miles east of Zweifall. While the 47th Infantry Regiment guarded the southern flank of the 3d Armored Division in the Stolberg Corridor, the 39th and 60th Infantry Regiments attacked through the difficult forest terrain studded with enemy mines, barbed wire, anti-tank obstacles, and pillboxes.

Craig faced the impossible task of sweeping back the enemy along a nineteen mile front in difficult, compartmentalized terrain. The only justification for such a mission was that the enemy lacked strength in the forest. The assumption was incorrect. The 9th Infantry Division measured progress pillbox-by-pillbox. The weather turned wet and cold, thereby increasing incidents of trenchfoot and other diseases. Artillery shells exploded in the trees and sent thousands of lethal metal and wood splinters flying through the air. Land navigation in the dark forest was difficult if not impossible. Engineers
found the only sure way to penetrate the six to eight foot thick reinforced concrete walls of enemy pillboxes was to attack through the roof with beehive charges and two hundred pound blocks of TNT. "It was a wearying and frustrating experience: counterattack following every attack; Germans infiltrating in the night into defensive perimeters; enemy patrols ambushing supply parties; mortar and artillery shells snapping branches and tops from the thick furs as if they were toothpicks and killing or maiming the men underneath." 

On 6 October the 9th Infantry Division made one final attack in an attempt to take Schmidt and clear the Huertgen Forest, but could not do so after a brutal, ten-day battle in the dense foliage (Figure 45). The battle was an unnecessary waste of manpower. At this stage of the war, too many American corps and army commanders had still not learned a fundamental lesson of modern warfare: that the best way through a difficult enemy position is to go around it. By ordering the 9th Infantry Division to make a frontal attack through the Huertgen Forest, the First U.S. Army commander, General Hodges, and the VII Corps commander, General Collins, nearly succeeded in destroying the 9th Infantry Division as a fighting organization. When the 28th Division relieved the 39th and 60th Infantry Regiments in the Huertgen Forest on 25 October, the 9th Infantry Division was a shell of its former self and badly needed an extended
THE FIRST ATTACK ON SCHMIDT
9TH DIVISION
6-16 October 1944

U.S. POSITIONS, 6 OCT
ROADBLOCK
U.S. AXIS OF ADVANCE
GERMAN COUNTERATTACK
U.S. POSITIONS, 16 OCT
WEST WALL PILLBOXES

Contour interval 50 meters

FIGURE 45
THE 9TH INFANTRY DIVISION ATTACK IN THE
HUERTGEN FOREST, 6 - 16 OCTOBER 1944

Source: Charles B. MacDonald, The Siegfried Line Campaign
period of rehabilitation. The division moved to Camp Elsenborn to integrate replacements, train, conduct maintenance on men and equipment, and rest.

By the end of October, Hodges should have realized that a lone infantry division could not clear the Huertgen Forest. By fighting in the Huertgen, the Americans gave up most of their advantages in terms of close air support, tank and tank destroyer support, and artillery firepower. The forest fighting was an infantry-against-infantry slugfest; the type of combat in which the tactically competent German forces, fighting on the defensive in prepared positions, excelled. Any renewed offensive would take at least a corps; better yet, the First U.S. Army could use economy of force in the forest to mass forces elsewhere and bypass the difficult area. Instead, Hodges committed the 28th Infantry Division, operating under Major General Leonard Gerow's V Corps, to the Huertgen in an attempt to seize the key terrain in the forest: the village of Schmidt and the high ground in its vicinity that dominated the approaches to the Roer River and its critical dams.

The 28th Infantry Division, the "Keystone Division," was a National Guard division from Pennsylvania. After the War Department activated the division in February 1941, it moved to Indiantown Gap to receive fillers and conduct training. The division participated in the Carolina Maneuvers in the fall of 1941. Major General Edward Martin,
the division's overage commander (he had enlisted in the National Guard in 1897), was relieved after Pearl Harbor. Army Ground Forces believed that the division needed a solid commander to transform it into an effective team. Marshall and McNair chose Major General Omar N. Bradley for the position.26

Like most National Guard divisions, the 28th Infantry Division suffered from high turnover of its personnel during its training. Bradley also had problems with "home-town cliques" in units that prevented the formation of cohesive teams among the National Guard soldiers and the new arrivals in the division. To combat these problems, Bradley transferred every officer and most noncommissioned officers out of their home-town units to different companies. By the fall of 1942 the 28th Infantry Division was beginning to show progress, and Bradley soon received orders assigning him to Eisenhower's headquarters in Tunisia.27 In October 1943, the 28th Infantry Division deployed overseas to England in preparation for the Normandy invasion.

The 28th Infantry Division engaged in its first combat in Normandy near the town of Percy and participated in early attempts to penetrate the West Wall with V Corps. The soldiers of the division gained valuable combat experience in these actions.28 In October the division received a period of rest and was at full strength by the end of the month. The division's new commander, Major General Norman
D. Cota, was a combat veteran who had waded ashore with the 29th Infantry Division on D-Day and had distinguished himself in the heavy fighting afterwards. Together, these factors augured well for the division's upcoming attack in the Huertgen Forest. Unfortunately, the attack would fail disastrously not due to the quality of the units involved, but due to abysmally poor planning by senior level commanders and their staffs.

General Hodges intended the attack of the 28th Infantry Division in the Huertgen Forest to be a supporting attack for the main effort by VII Corps further to the north. The V Corps commander, General Gerow, ordered the division to use two of its infantry regiments to guard its northern and southern flanks, however, which left only the 112th Infantry Regiment for the main attack to seize the high ground near Schmidt. The only supply route for this force was a steep cart path, unsuitable for heavy armored vehicles, that traversed the Kall River gorge. General Hodges concurred in Gerow's plan of attack. The dictates by army and corps commanders and staffs had left almost no initiative to General Cota and his division staff. Worse still, although bad weather and the slow arrival of divisions forced General Bradley to postpone the VII Corps attack for two weeks, no senior commander, from Bradley to Hodges to Gerow to Cota, suggested a postponement of the attack of the 28th Infantry Division in the Huertgen Forest. The
Pennsylvanians would attack alone, "thrown to the wolves" in the words of the U.S. Army historian of the operation.  

As a result of poor planning by army, corps, and division staffs, the 28th Infantry Division met disaster in the Huertgen Forest (Figure 46). The division attacked as scheduled on 2 November, and the 112th Infantry Regiment even succeeded in seizing Schmidt the next day. For the next two weeks, however, the lack of action elsewhere allowed the Germans to recover and decimate the three American infantry regiments in the Huertgen Forest. The 109th Infantry Regiment took only half its objectives, and the 110th Infantry Regiment went nowhere. German counterattacks drove the 112th Infantry Regiment from Schmidt and eventually forced it back across the Kall River. German artillery hammered constantly at the exposed American troops. Poor weather grounded air support and worsened the already poor physical condition of the men. Many leaders collapsed under the prolonged strain of the intense battle. Morale in the Keystone Division finally vanished, replaced by apathy.  

Within a week a combination of too many casualties leaving and too many untrained replacements arriving rendered the regiments of the 28th Infantry Division combat ineffective. On 9 November the G1 warned:

Upon learning that it was contemplated to commit the 2d Battalion, 112th Infantry Regiment, to an attack on the morning of the 10th, a report was made to the G-3 that this battalion, while up
FIGURE 46
THE 28TH INFANTRY DIVISION ATTACK IN THE HUERTGEN FOREST, 2 – 9 NOVEMBER 1944

to strength, could not be considered more than 20 percent effective for combat, 515 replacements having been placed in the battalion the day previous.35

By the time the 28th Infantry Division left the battlefield on 19 November, it had sustained well over five thousand casualties; soldiers began referring to the red Keystone patch of the division as the "bloody bucket."36 The division required extensive reconstitution in order to regenerate its combat power.37 The First U.S. Army staff decided the best place to accomplish this task was in a quiet part of the front in the Ardennes Forest directly east of the Belgian town of Bastogne.

Three more divisions were to enter the crucible of the Huertgen Forest before the battle ended. The 1st, 4th, and 8th Infantry Divisions--all battle tested units--fared little better than the 9th and 28th Infantry Divisions in combat there. The employment of these divisions followed the earlier pattern. Each participated in single division attacks, suffered horrendous casualties, became combat ineffective for offensive operations, and was only then relieved by a fresh division. One can trace the failure of American infantry divisions in the Huertgen Forest to the enemy, terrain, and weather, but the real culprit was the failure of the First U.S. Army commander and his staff to maneuver their forces effectively at the operational level of war. No single division could have succeeded alone in the Huertgen Forest, yet Hodges allowed division after
division to be sucked into the quagmire in piecemeal fashion. Hodges could have used a corps to attack through the Monschau Corridor and Losheim Gap to seize Schmidt and the Roer River dams from the south. Instead, he used an unimaginative frontal attack directly through the worst terrain in his zone of operations. After the failure of the 9th Infantry Division to seize its objectives in September and October, even a casual observer should have recognized that the best way through the forest was to go around it. Instead, over 33,000 American troops paid the price in blood to seize a piece of worthless terrain that led nowhere.38

Losses on the scale suffered by the 12th Army Group in the fall of 1944 required Herculean efforts by personnel managers to reconstitute divisions and keep them in the fight. An examination of casualty statistics in the 9th Infantry Division between 1 July and 31 October highlights the problem (Table 6). The 9th Infantry Division lost 17,974 men in just four months. Of these men, 3,235 returned to duty within 30 days. The net loss for the division was therefore 14,739 men, or over 100 percent of its organic strength. The situation in the three infantry regiments was even bleaker. In these four months the infantry regiments, which accounted for only half of the division's strength, suffered over 85 percent of the division's casualties. Not even counting non-battle casualties, the three regiments had 1,651 men killed and
TABLE 6
9TH INFANTRY DIVISION CASUALTIES, 1 JULY TO 31 OCTOBER 1944

<table>
<thead>
<tr>
<th>MONTH</th>
<th>KILLED</th>
<th>WOUNDED</th>
<th>EXHAUSTION</th>
<th>NON-BATTLE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>JULY</td>
<td>712</td>
<td>2989</td>
<td>520</td>
<td>1315</td>
<td>5536</td>
</tr>
<tr>
<td>AUGUST</td>
<td>376</td>
<td>1809</td>
<td>280</td>
<td>1540</td>
<td>4005</td>
</tr>
<tr>
<td>SEPTEMBER</td>
<td>218</td>
<td>1551</td>
<td>161</td>
<td>1457</td>
<td>3387</td>
</tr>
<tr>
<td>OCTOBER</td>
<td>384</td>
<td>2224</td>
<td>280</td>
<td>2158</td>
<td>5046</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>1690</strong></td>
<td><strong>8573</strong></td>
<td><strong>1241</strong></td>
<td><strong>5155</strong></td>
<td><strong>17974</strong></td>
</tr>
</tbody>
</table>

SOURCE: HQ, 9th Infantry Division, Report of Operations, July–October 1944, File 309-0.3, Box 7326, Record Group 407, National Archives, MMRB.

7,072 men wounded, more than the total organic strength of the twenty-seven infantry companies in the division.\(^{39}\)

Constant battle and continuous casualties had depleted the stock of trained and experienced men with which the 9th Infantry Division had entered the continent of Europe.

Officer casualties were particularly severe. Between 10 June and 30 September, the 47th Infantry Regiment lost 163 officers in combat. Every infantry company had lost at least six officers, the average loss per company was eleven, and one company had lost eighteen officers.\(^{40}\) Since the authorized officer strength of an infantry company was six, the impact of these losses on the leadership of the unit is not hard to imagine. As the campaign progressed, the average experience level of the company-grade officers declined.
The impact of continuous combat on the soldiers took a tremendous toll. "No one was enamored of constantly being in the line," one veteran wrote. "There was no out except KIA [killed in action], WIA [wounded in action], captured, or war over." The 60th Infantry Regiment's history explained the burden of the infantryman in combat:

You were generally tired. Fighting and moving on foot for weeks on end—sleeping out on the ground, wet most of the time, always tense, eating cold rations, seeing buddies die—you just never seemed able to really rest. You seldom had your raincoat, and it never failed to rain—rain until there wasn't a dry stitch on your body.

The infantryman had to wage a war against two enemies: the Germans and nature. If the enemy did not kill, wound, or capture him, there was a good chance that the infantry soldier would succumb to trenchfoot, hypothermia, illness, or disease.

As the First U.S. Army sent in more and more individual replacements to fill the depleted ranks of the infantry companies, the character of the 9th Infantry Division changed. Many of these men became casualties within a week of arrival. The 60th Infantry Regiment warned:

Never send replacements to a company in the heat of battle. It has been found from experience that new men arriving during a fight are bewildered by lack of knowledge of the situation and not knowing their leaders they are in many cases more hindrance than help. We have had several new men become casualties almost immediately after being assigned because of this. We have found it a good policy to wait for a slight lull in the battle so the replacements have a chance to get oriented.
To integrate new men into their units, most companies teamed up replacements with veteran soldiers to teach the new men how to stay alive in combat. As time progressed, however, veterans became an endangered breed. "At one point [in the] Huertgen Forest," one veteran stated, "a vet was 2 weeks old." If a replacement survived a week or two in combat, he usually became a capable part of the team. Many did not live that long. Like most infantry divisions in Europe, the 9th Infantry Division suffered during its extended periods in the line, and paid the price of the ninety division gamble in blood.

The United States Army had not always used a system of individual replacements. During the Civil War, the Union Army raised regiments which then fought without replacements until they were completely destroyed, disbanded, or amalgamated with other units. This policy changed in World War I, during which the United States fielded fifty-eight divisions and shipped forty-two of them overseas. Twelve of the divisions sent to France were disbanded to provide replacements for the twenty-nine divisions committed to the battles of St. Mihiel and the Meuse-Argonne Forest. By contrast, in World War II the War Department was able to maintain all of the divisions it raised at close to full strength by providing enough individual replacements to replace losses without completely disbanding other units to provide them. Since infantry divisions committed to combat
in the ETO tended to remain engaged in combat for extended periods without relief, they had to integrate thousands of individual replacements on or near the front line.46

Many divisions developed mechanisms to cope with the problem of integrating individual replacements into the organization during extended operations. Major General Charles Gerhardt of the 29th Infantry Division, for example, formed a training center from combat-experienced officers and noncommissioned officers. The purpose of the training center was to train new junior officers, noncommissioned officers, and replacements to prepare them for their future duties. Rather than move replacements and soldiers returning from hospitals directly to their new units, the division held them at the training center for two days to issue them new clothing and equipment, give them a chance to fire their weapons and throw a hand grenade, have them participate in standard battle drills, let them have a hot meal and a shower, sew the division patch on their helmets and clothes, and orient them to the division's past achievements and its current situation. During November 1944 the replacement battalion retrained 250 artillery soldiers as infantrymen to combat the growing shortage of infantry replacements at the front. Gerhardt also used the training center to rehabilitate soldiers who performed poorly in combat, men who had performed criminal acts, and combat exhaustion cases. Soldiers reacted positively to
their experiences in the training center. One soldier remarked, "The 29th Training Center is the best that I have been through. Since I have been wounded, the other replacement depots treated us like a bunch of bastards." Unfortunately, care and concern shown for the replacements assigned to the Blue and Gray Division was not reflected uniformly throughout the rest of the ETO.

Care of combat exhaustion cases became an increasingly important problem as the campaign lengthened. Between 12 June and 2 October 1944, the 29th Infantry Division suffered 1,827 combat exhaustion cases (12.5 percent of all battle casualties), but the training center was able to return 1,053 men to duty (enough to man over five infantry companies at full strength). The division psychiatrist of the 29th Infantry Division resided at the training center with fifteen medical assistants. His purpose was to screen combat exhaustion cases and to rehabilitate those considered "salvageable." The division routed all combat exhaustion cases directly from clearing stations to the division training center. The casualties received two days of rest along with a chance to eat, shower, and change into clean clothes. On the third day, the division psychiatrist interviewed each man to determine whether to return him to duty, enroll him in the program at the training center, or to evacuate him out of the division. The training process consisted of five to ten days of weapons firing and battle
drills designed to give the soldier self-confidence in his abilities to deal with combat situations.\textsuperscript{48}

The division psychiatrist of the 29th Infantry Division, Major David I. Weintrob, found that the majority of combat exhaustion cases stemmed from either poor pre-combat training or excessive physical fatigue stemming from extended periods of combat. Another problem was that many replacements who originated from divisions training in the United States found themselves suddenly thrust into combat with leaders and soldiers with whom they had neither trained nor come to trust. A significant number of combat exhaustion cases stemmed from replacements who were in combat for the first time. "I believe that the practice of breaking up a trained division, and parceling its troops out to various combat divisions as replacements, negates a fundamental and very important principle of military philosophy," Major Weintrob stated. "The unit morale, long association with ones 'buddies,' is immediately lost, and the man goes into combat a total stranger to his outfit."\textsuperscript{49}

The personnel replacement system used by the Army of the United States was impersonal, but it effectively kept America's combat divisions in the fight. The following is one officer's reminiscence of his return to his old battalion after six months in the hospital:

My return was received casually enough; after nine months of constant turnover, there was little
notice of coming and going; some men had been wounded, evacuated, and returned twice and three times. The corps personnel officer who had stirred my ire at Vire by speaking of the battalion as a machine with replaceable parts was right. There were a few veterans who had come all the way, and their faces and movements showed it. Apologetically, they had to ask when it was I had left; one thought I had been killed.\textsuperscript{50}

Sooner or later, most soldiers employed too long at the front reached a breaking point, or succumbed to fear and fatigue by reaching a somnambulistic state dubbed "combat numbness" by one observer.\textsuperscript{51} The key to their recovery, as the 29th Infantry Division discovered, was early treatment close to the front lines.\textsuperscript{52} The key to the prevention of combat exhaustion was to rotate troops out of the front line at frequent intervals, a course of action not available to American commanders due to the lack of divisions in France in the fall of 1944. Perhaps what is remarkable about American infantrymen in the campaign for France and Germany is not the fact that they succumbed to battle fatigue, but that they could recover their morale so quickly despite the lack of prospects for immediate relief from combat.

While veteran divisions wrestled with the problems involved in maintaining their effectiveness in the fall of 1944, other divisions underwent their first experiences in combat. Some of these divisions performed well, others took longer to develop into effective teams. An examination of the 104th Infantry Division in its first few weeks in combat shows how one division was able to succeed in its first
battles despite its lack of combat experience. The Timberwolves first combat experience came in Holland between 23 October and 7 November 1944 as part of I(BR) Corps, First Canadian Army, during its operations to clear the Scheldt Estuary (Figure 47). After relieving the 49th(BR) Division, the 104th(US) Infantry Division attacked north towards Zundert along the highway from Antwerp to Breda. Characteristically, Major General Terry de la Mesa Allen ordered his units to conduct night attacks to seize their objectives. His field order to the division also reflected his personality as he wrote in the coordinating instructions, "NOTHING IN HELL CAN STOP THE TIMBERWOLF DIVISION."

The 104th Infantry Division performed its first missions well by seizing Zundert and conducting a deliberate river crossing of the Mark River at night. The soldiers of the division proved the soundness of their training by successfully conducting difficult limited visibility attacks night after night. Upon the division's departure from Holland to join VII(US) Corps near Aachen, the commander of the First Canadian Army, Lieutenant General G.G. Simmonds, wrote:

I realize that it is not easy for a division to have its introduction to battle in an Army other than its own. Nevertheless, once the "Timberwolves" got their teeth into the Boche, they showed great dash, and British and Canadian troops on their flanks expressed the greatest admiration for their courage and enthusiasm.
FIGURE 47
THE 104TH INFANTRY DIVISION IN HOLLAND,
23 OCTOBER – 7 NOVEMBER 1944

Source: Charles B. MacDonald, The Siegfried Line Campaign
(Washington: Office of the Chief of Military History,
1963), 217.
During the time 104 US Infantry Division has served in the First Canadian Army relations have been most cordial and we have received the utmost cooperation from General Allen, his Staff and all commanders. I am sorry that they are leaving and feel sure that when they again meet the Boche "all hell cannot stop the Timberwolves." 56

Indeed, the 104th Infantry Division had received its baptism of fire, was measured, and was not found wanting.

General Collins understood the bond between Allen and his old division, the Big Red One. Collins believed that Allen was on a quest to make his new command the equal of the 1st Infantry Division. "With a view to stimulating both divisions," Collins recalled, "I placed the 104th in the line adjacent to the 1st." 57 When the VII Corps attacked on 16 November, Allen's division initially had some difficulty in clearing the Eschweiler-Weisweiler industrial triangle. Collins "made clear to Allen that I expected better results." 58 Four days after the assault began, the 414th Infantry Regiment finally broke the enemy resistance on the Donnerberg, the key terrain in the area, by infiltrating enemy positions under the cover of darkness. 59 Allen then unleashed his regiments in a series of night attacks that swept through German defenses and earned for the Timberwolves the reputation as the premier night-fighting division in the Army of the United States. 60

Allen told General Hobbs of the 30th Infantry Division on his northern flank that his men "don't go to bed too early. In fact, they have insomnia." 61
Limited visibility attacks are tricky operations that require well-trained troops and a great degree of expertise among the tactical commanders involved. Allen had made sure through hard training in the United States that the Timberwolves were ready for night operations when their time came. General Collins also gave Allen's assistant division commander, Brigadier General Bryant E. Moore, "a large measure of credit" for the success of the 104th Infantry Division. Moore had served with the Americal Division on Guadalcanal, and according to Collins his "skill as a tactician and trainer complemented perfectly Allen's flamboyant leadership." Collins later commended the Timberwolves:

I regard the operation which involved the seizure of Lamersdorf - Inden - Lucherberg as one of the finest single pieces of work accomplished by any unit of the VII Corps since D-Day...I and my staff were tremendously impressed with the cooperative spirit and exceptional fighting ability of the officers and men of all ranks. We regard the Timberwolf Division as one of the finest assault divisions we have ever had in this Corps.

By the end of the war in Europe, Collins believed that Allen had made good on his boast to make the 104th Infantry Division the equal of the Big Red One.

The night attacks by Allen's Timberwolves carried the division to the banks of the Roer River by mid-December. To its north Lieutenant General William H. Simpson's Ninth U.S. Army, composed of the 29th, 30th, 84th, and 102d Infantry Divisions and the 2d Armored Division, had cleared the banks
of the river by 9 December. To the south, the 9th and 83d Infantry Divisions and 5th Armored Division of Collin’s VII Corps also fought their way to the Roer. There the advance stalled, held in check by the threat of a flood of water from the undamaged Urft and Schwammenauel Dams further upriver (Figure 48). All the bloodshed in the Huertgen Forest had not led to the seizure of these decisive objectives by Hodge’s First U.S. Army. The Siegfried Line campaign was not without its benefits, however. Although operations by the U.S. First and Ninth Armies in closing up to the Roer did not lead to a breakthrough, they did keep German divisions engaged and continued the attrition of enemy forces while the Allies opened Antwerp as a supply conduit.65

To the south of the First U.S. Army, Lieutenant General George S. Patton’s Third U.S. Army struggled towards the German border through Lorraine. In the fall of 1944, his divisions fought the same difficult combination of stiffening enemy resistance, rough terrain, and bad weather with which their counterparts to the north contended. The battle for Metz illustrates the problems that faced infantry divisions in the Third U.S. Army during the fall of 1944.

Patton gave the mission of seizing Metz to the XX(US) Corps, under the command of Major General Walton Walker.66 The corps consisted of two veteran divisions, the 5th and 90th Infantry Divisions, and two new divisions, the 95th
THE SIEGFRIED LINE CAMPAIGN
11 September - 15 December 1944

Front Line, 11 September
Front Line, 15 December
West Wall

Source: Charles B. MacDonald, The Siegfried Line Campaign (Washington: Office of the Chief of Military History, 1963), Map IX.
Infantry Division and the 10th Armored Division. The attack would commence on 9 November with an attack by the 90th Infantry Division to isolate Metz from the north while the 5th Infantry Division enveloped the city from the south.

Both the 5th and the 90th Infantry Divisions had seen action during the Normandy campaign. The 5th Infantry Division, the "Red Diamond" Division, was activated in October 1939 and took part in both the Tennessee and Louisiana maneuvers of 1941. The War Department then sent the division to garrison Iceland, where it languished until it moved to Great Britain in August 1943. The division landed on Utah Beach on 9 July 1944 and participated in the latter stage of the Normandy campaign. For a full month between mid-September and mid-October, the 5th Infantry Division had attempted to take Metz, but failed in the face of heavy opposition. Its commander was Major General S. LeRoy Irwin, USMA Class of 1915, an artillery officer who had commanded the division artillery of the 9th Infantry Division during the North African campaign.

The 90th Infantry Division would enter the battle for Metz under a new commander, Brigadier General James A. Van Fleet. Van Fleet was another member of the West Point Class of 1915. He had commanded a machine gun battalion during the Meuse-Argonne offensive in World War I, where he was wounded in action and earned two citations for valor. Van Fleet was an imposing man, a football player who coached
at the University of Florida while on ROTC duty in 1923-24. He commanded the 8th Infantry Regiment in the 4th Infantry Division for three years prior to D-Day while his classmates rose to the general officer ranks. General McNair and General Marshall had confused Van Fleet with another officer, Van Vliet, who had both a drinking problem and a similar last name. The confusion kept Van Fleet from being promoted, even though every commander of the 4th Infantry Division from 1940 to 1944--Fredendall, Griswold, Wallace, and Barton--had recommended him for elevation to general officer.70 Van Fleet’s well-trained regiment spearheaded the invasion of UTAH Beach on D-Day.

After General Bradley cleared up the confusion over his identity, Van Fleet rose quickly. He was given his first star and became Assistant Division Commander of the 2d Infantry Division during the Brest Campaign, and was serving as acting commander of the 4th Infantry Division (Barton was ill) when he was ordered to take over the 90th Infantry Division on 15 October.71 William E. Depuy, who at the time was the regimental S-3 of the 357th Infantry, recalled the change of command:

We hated to see McLain go but Van Fleet was recognized as a fine fellow and he was. Van Fleet got around and talked to people and he wasn’t a command post general. He was not as articulate as McLain, he was more stolid. Indeed, he was a massive man; he was sort of awe-inspiring because of his mass. And he knew what he was doing. There wasn’t a ripple when he came in. He didn’t change anything.72
Eisenhower called Van Fleet's battle record the best "of any regimental, divisional, or corps commander we produced."73

Like other veteran divisions, constant commitment at the front caused a drain on the manpower of both the 5th and 90th Infantry Divisions. Like their counterparts to the north, the divisions of Patton's Third U.S. Army found that the best way to integrate replacements was while in reserve. General Van Fleet recalled:

Our strength around Metz, where we were temporarily on the defensive preparing for the capture of Metz, our units got very depleted. Replacements were slow coming, and by then we had learned not to put replacements in a front line unit, but put them in a reserve unit and get them acquainted with their buddies and a little bit of orientation before they're committed to battle. So, our units that we were not using, we broke up...All those units were assigned to fill in the infantry, and we even took headquarters clerks and said they all had to do a tour of the front.74

Improvisations such as these kept infantry divisions in the fight, but the lack of trained replacements reduced the effectiveness of infantry units. Shortly after the battle for Metz, when the 90th Infantry Division assaulted across the Saar River, Depuy (now a battalion commander) had to put some soldiers into the boats at pistol point. "I suppose that is not an approved leadership technique," he later quipped.75

The 95th Infantry Division was an organized reserve division activated in July 1942 at Camp Swift Texas, with cadre drawn from the 7th Infantry Division. The division participated in maneuvers in Louisiana and at the Desert
Training Center in California before deploying to Great Britain in August 1944. During its existence, the division had only one commander, Major General Harry L. Twaddle, who had come from the War Department where he had served as the G-3. Although the division entered the lines on 19 October in the Moselle River bridgehead, Metz would be its first significant combat experience.76

The XX Corps plan for the seizure of Metz envisioned an attack to encircle the city by the 5th and 90th Infantry Divisions, while the 95th Infantry Division contained the German salient west of the Moselle River. General Walker gave the 10th Armored Division the mission of following the 90th Infantry Division until he committed it to closing the pincers east of Metz.77

For two months the 5th and 90th Infantry Divisions had faced the enemy positions at Metz. This interval allowed the American units to plot precise enemy locations and develop detailed plans for the attack. Commanders rotated troops out of the line, integrated replacements, and trained units in assault tactics. Prior to the attack, commanders briefed units down to the lowest level on the plan and the role of each soldier in it.78

The weather for the operation was miserable. Incessant rain and snow flurries grounded air support for much of the time, slowed road traffic, turned the numerous streams in the area into raging torrents, and caused the Moselle River
to reach flood stage. Nevertheless, the attack commenced as scheduled on 9 November.

The 90th Infantry Division began the assault with a crossing of the Moselle River at 0330 hours under cover of darkness (Figure 49). The strong river current made the crossing by assault boat extremely difficult, but the lead battalions managed to cross by dawn. Despite this success, the swift current swept numerous assault boats down river. The rapidly rising river made bridging operations nearly impossible. Engineers worked waist-deep in freezing water to complete their tasks. Meanwhile, the eight infantry battalions on the far side of the river found themselves without the support of tanks or tank destroyers. Engineers completed work on a treadway bridge at 0200 hours on 11 November, but flooding of the causeway leading to the bridge rendered it unusable for another twenty-four hours. For four days the eight infantry battalions across the river fought with only the limited supplies that could be ferried across the Moselle at night, albeit protected by substantial artillery support. Rain and cold heightened the impact of continuous combat and caused numerous exposure and trench foot casualties. Despite these obstacles, the infantry battalions continued their attack through the forts of the old Maginot Line. On the morning of 12 November, the Moselle finally receded enough to allow vehicles to cross the bridge.
FIGURE 49
THE 90TH INFANTRY DIVISION CROSSES THE MOSELLE RIVER, 9-14 NOVEMBER 1944
Armored vehicles began crossing the Moselle none too soon, for a Kampfgruppe of the German 25th Panzergrenadier Division launched a strong counterattack against the 359th Infantry Regiment at 0300 hours on 12 November. The enemy nearly penetrated to the bridge site before the 359th Infantry, supported by the twenty battalions of artillery available to the division, held firm. Two tank destroyers that crossed the Moselle in the early morning hours soon arrived to take the enemy armor under fire. A counterattack by 2d Battalion forced the Germans to retreat, but enemy artillery fire destroyed the bridge over the Moselle. The engineers of the 991st Engineer Treadway Bridge Company responded by putting a heavy ferry into operation while they built another bridge. DUKWs soon arrived from Third U.S. Army depots to help transport supplies.

By the end of the fourth day of the operation, six battalions of infantry in the 90th Infantry Division were at only 50 percent strength. While work proceeded on another bridge, two sections of a smoke generator company, a chemical mortar battalion, and two battalions of artillery protected the work by creating a continuous smoke screen during daylight hours to prevent enemy observation of the bridge site. Enemy mines, uncovered as the Moselle receded, delayed construction. At 1740 hours on 13 November, the first vehicle finally crossed the Moselle on the completed bridge. Throughout the night, traffic rolled across the
river in a steady stream. In less than twenty-four hours, the vehicles of the 90th Infantry Division, to include attachments and four additional battalions of artillery, crossed the river on a single span. The "Tough 'Ombres" were across the Moselle to stay.83

To expand the bridgehead, Walker ordered the 10th Armored Division to cross the Moselle on 14 November. The next day, the armor entered the battle alongside the 90th Infantry Division. Both divisions continued the attack to the south and east. The G-3 of the 90th Infantry Division noted, "Teamwork among the several components of the Division developed in five months of hard combat was paying off. The artillery was meeting every demand for fires and anticipating the bulk of the requests. Tanks and tank destroyers rendered close effective support at all times. The Engineers were closely integrated with the infantry in the assault team formations and had the routes open to traffic immediately behind the leading infantry elements."84 Despite have suffered 2,300 casualties, the division advanced the final twenty-one kilometers to its objective and captured 2,100 enemy soldiers along the way.85 On 17 November the weather finally cleared, and planes of the XIXth Tactical Air Command joined the fight to bomb and strafe enemy forces. At 1100 hours on 19 November, the 90th Reconnaissance Troop made contact with the 735th Tank Battalion, supporting the 5th Infantry Division, thus
completing the encirclement of Metz. General Patton wrote to Van Fleet, "The capture and development of your bridgehead over the Moselle River...will ever rank as one of the epic river crossings of history." Fittingly, during the middle of the operation Van Fleet received his second star. For its role in the operation, the 90th Infantry Division earned a Distinguished Unit Citation, one of only a dozen awarded to American divisions in the ETO.

While the 90th Infantry Division conducted the corps main attack, the 5th and 95th Infantry Divisions conducted supporting attacks to envelop and seize Metz (Figure 50). The 5th Infantry Division had the advantage of beginning the attack from a bridgehead east of the Moselle River, although it still had to cross the smaller Seille River in its zone. Due to the wide zone his division was responsible for, General Irwin committed only the 2d Infantry Regiment to the attack for the first several days. The 2d Infantry was able to cross both the Seille and Nied Rivers, aided by the advance of the 6th Armored Division to its south.

Late on 13 November, General Walker gave Irwin the mission of seizing Metz from the south. The 10th and 11th Infantry Regiments swung north into the attack. By the time the 2d Infantry Regiment made contact with the 90th Infantry Division east of the city, the 10th and 11th Infantry Regiments had already secured the southern half of Metz. Meanwhile, the 95th Infantry Division joined in the assault
FIGURE 50
THE ENVELOPMENT OF METZ, 8 – 19 NOVEMBER 1944

on Metz from the west. On 19 November, the 377th and 378th Infantry Regiments entered Metz after hard fighting and linked up with the 5th Infantry Division. Mopping up operations took three days, but by the afternoon of 22 November, Metz was in American hands. The 95th Infantry Division had been successful in its first battle.88

The Siegfried Line and Lorraine campaigns demonstrated the ability of fresh American divisions to perform well during their initial entry into combat. The official historian of the Siegfried Line campaign observed:

In Normandy it had become almost routine for a division in its first action to incur severe losses and display disturbing organizational, command, and communications deficiencies for at least the first week of combat indoctrination. Yet in no case was this tendency present to a similar degree among those divisions receiving their baptism of fire during the Siegfried Line Campaign.89

Perhaps, as the official historian felt, the reason for the success of these divisions was better training based on actual combat experience and the high percentage of Army Service Training Program candidates these divisions possessed. Perhaps the Wehrmacht at this stage of the war was losing some of the effectiveness that characterized its earlier campaigns. Another more likely reason is that the high command was holding the bulk of German reinforcements for its impending winter counteroffensive in the West. There, among the steep hills, forest, and river valleys of the Ardennes, German and American divisions would clash in a
titanic struggle that would determine the fate of the Third Reich.
ENDNOTES

1. The combat experienced divisions were the 1st, 2d, 3d, 4th, 5th, 8th, 9th, 29th, 30th, 35th, 36th, 45th, 79th, 83d, and 90th Infantry Divisions. The 26th, 28th, 44th, 80th, 94th, 95th, 102d, and 104th Infantry Divisions had seen little or no combat by the end of September 1944.

2. These were the 42d, 63d, 66th, 70th, 75th, 78th, 84th, 87th, 99th, 100th, 103d, and 106th Infantry Divisions.


4. Ibid., 95.


6. Ibid., 253-54.

7. Ibid., 261.

8. Ibid., 269.

9. Ibid., 279.

10. HQ, 1st Infantry Division, "Report of Breaching the Siegfried Line and the Capture of Aachen," 31 October 1944, pp. 7-8, File 301-0.3.0, Box 5664, Record Group 407, National Archives, MMRB.

11. HQ, 1st Infantry Division, "Report of Operations, 1-31 October 1944," 5 November 1944, File 301-3, Box 5762, Record Group 407, National Archives, MMRB.


13. HQ, U.S. Forces, European Theater, "Distinguished Unit Citation for the 30th Infantry Division," 14 December 1945, USFET AG Section, Unit Citation Awards, Box 3, Record Group 332, National Archives, MMRB.


15. 1st Infantry Division, "Report of Breaching the Siegfried Line and the Capture of Aachen," 12.


18. Ibid., 64.

19. On 19 August the former commander, Major General Manton Eddy, moved to the U.S. Third Army to take command of XII Corps.

20. HQ, 9th Infantry Division, "Report of Operations, 1-30 September 1944," 1 October 1944, pp. 13-14, File 309-0.3, Box 7326, Record Group 407, National Archives, MMRB.


22. Ibid., 83.


25. Ibid., 67-86.


28. "History of the 110th Infantry Regiment from Activation on 17 February 1941 to Inactivation on 25 October 1945," p. 39, File 328-INF(110)-0.1, Box 8596, Record Group 407, National Archives, MMRB.

29. The division commander in Normandy was Major General Lloyd D. Brown, who was relieved in August 1944. His replacement, Brigadier General James E. Wharton, was killed in action on the day he took command. General Cota then assumed command of the division.


31. MacDonald, The Battle of the Huertgen Forest, 94.


33. Edward J. Drea, Unit Reconstitution--A Historical Perspective (Ft. Leavenworth, KS: Combat Studies Institute, 1983), 44.

35. HQ, 28th Infantry Division, "Unit Report No. 5," 6 December 1944, p. 12, File 328-0.3, Box 8479, Record Group 407, National Archives, MMRB.


37. Drea, *Unit Reconstitution*, 29-30. Interestingly, the division's after-action report rated the combat efficiency of the division as "excellent," an indication that the division headquarters was out of touch with events in the field. HQ, 28th Infantry Division, "Unit Report No. 5," p. 6.


40. HQ, 47th Infantry Regiment, "Report of Operations, 10 June - 30 September 1944," 9 October 1944, File 309-INF(47)-0.3, Box 7515, Record Group 407, National Archives, MMRB.

41. Roy Gordon, 47th Infantry Regiment, 9th Infantry Division World War II Survey, USAMHI, Carlisle Barracks, PA.

42. *60th: Follow Thru* (Stuttgart: 1945), 92.


44. Leo C. Williamson, K Company, 3d Battalion, 60th Infantry Regiment, 9th Infantry Division World War II Survey, USAMHI, Carlisle Barracks, PA.


46. Airborne units did not suffer this problem due to the sporadic nature of their combat. Airborne divisions committed to the Normandy invasion, for instance, did not integrate any replacements into their structure until after
they were withdrawn from combat in July 1944. Armored divisions suffered to some extent, but they usually received more time in reserve than infantry divisions. The best time to integrate replacements is when a unit is in reserve.

47. HQ, 29th Division Training Center, "After Action Report," November-January 1944, File 329-TC-0.3, Box 8722, Record Group 407, National Archives, MMRB.

48. HQ, 29th Infantry Division, "Combat Exhaustion Survey," 2 October 1944, File Cl 84, Box 24035, Record Group 407, National Archives, MMRB.

49. Ibid.


52. HQ, Army Service Forces, "Field Therapeutical Expedient Exhaustion Center for Neuro-Psychiatric Injuries," 7 December 1944, File 1-16.383/44, Box 24397, Record Group 407, National Archives, MMRB.

53. HQ, 104th Infantry Division, "After Action Report," 10 November 1944, p. 4, File 3104-0.3, Box 14616, Record Group 407, National Archives, MMRB.

54. HQ, 104th Infantry Division, Field Order #5, 24 October 1944, File 3104-0.3, Box 14616, Record Group 407, National Archives, MMRB.

55. HQ, 104th Infantry Division, "After Action Report," 7 December 1944, File 3104-0.3, Box 14616, Record Group 407, National Archives, MMRB.

56. HQ, First Canadian Army, "Commendation--104th Infantry Division," File 3104-INF(415)-0.1, Box 14707, Record Group 407, National Archives, MMRB.


58. Ibid., 275.


60. Collins, Lightning Joe, 277.


63. Letter, Major General J. Lawton Collins to Major General Terry de la Mesa Allen, 26 December 1944, The Terry de la Mesa Allen Papers, USAMHI. In another letter in the Allen papers dated 27 December 1944, Colonel H.H. York wrote to General Allen, "I thought you might be interested to know that I personally overheard Gen. Collins say that it (yours) was the outstanding new division in France."


66. After World War II ended, Walker continued to rise in the United States Army. During the Korean War, he commanded the U.S. Eighth Army in the first crucial months of the conflict. His career ended in a jeep crash in December 1950 as he attempted to extricate his troops from trap of the Chinese counteroffensive.


69. Major General Raymond McLain, the National Guard officer who had done so much to turn the division around, received command of XIX Corps on 15 October.


71. Van Fleet would go on to command both the XXIII Corps and the III Corps during World War II. During the Korean War he served as commander of the U.S. Eighth Army after General Matthew B. Ridgway assumed General Douglas MacArthur's position as supreme commander. Van Fleet was as courageous as he was competent; his decorations from World War II include the Distinguished Service Cross with two Oak Leaf Clusters, the Distinguished Service Medal with Oak Leaf Cluster, the Silver Star with two Oak Leaf Clusters, the
Legion of Merit with Oak Leaf Cluster, the Bronze Star for valor with two Oak Leaf Clusters, and the Purple Heart with two Oak Leaf Clusters. The James A. Van Fleet Papers, USAMHI.


73. Time, April 23, 1951: 36.


76. Combat Chronicle, 80.


78. HQ, 90th Infantry Division, "Operations of the 90th Infantry Division, 1 November - 1 December 1944," 1 December 1944, File 390-0.3, Box 13280, Record Group 407, National Archives, MMRB.


80. HQ, 90th Infantry Division, "Operations of the 90th Infantry Division, 1 November - 1 December 1944," 9-16.

81. The 991st Engineer Treadway Bridge Company was later awarded a Distinguished Unit Citation for its actions during the battle.

82. HQ, 90th Infantry Division, "Operations of the 90th Infantry Division, 1 November - 1 December 1944," 16-18.

83. Ibid., 18-22.

84. Ibid., 24.

85. Ibid., 29.

86. HQ, Third United States Army, "Commendation," 12 November 1944, File 390-0.3, Box 13280, Record Group 407, National Archives, MMRB.


88. Ibid., 433-49.

89. Ibid., 621.
CHAPTER IX
THE BATTLE OF THE BULGE AND THE FINAL OFFENSIVE INTO GERMANY

The Normandy campaign and the Battle of the Bulge were the two most critical tests of the Army of the United States in World War II. One was a great offensive victory and the other was a defensive triumph. Both displayed the strengths and weaknesses of American infantry divisions in combat: their great staying power, the effectiveness of the infantry-tank-artillery team, the ability of veteran units to accomplish their missions despite heavy casualties, and the problems associated with inexperienced divisions committed to heavy fighting upon their initial entry into combat. There were some important differences, too. In Normandy the Allies enjoyed consistent close support from their air forces. During the first critical week of the Battle of the Bulge, poor weather grounded most aircraft. Although the Wehrmacht suffered from shortages of some supplies (particularly fuel) in the Ardennes, their lines of communication were shorter than in Normandy and not as vulnerable to Allied air interdiction. In short, the strength of the opposing forces was much more equal during the German counteroffensive in the Ardennes, at least during
the first critical week. More than any other event in World War II, the Battle of the Bulge would test the combat effectiveness of the ground divisions of the Army of the United States against a capable opponent on nearly equal terms.

The German counteroffensive in the Ardennes, code-named WACHT AM RHEIN (Watch on the Rhine), hit the weakest part of the Allied front. The VIII(US) Corps in the Ardennes Forest, commanded by Major General Troy Middleton, was composed of both veteran divisions in need of rest and green divisions in need of combat experience. The 4th and 28th Infantry Divisions had both undergone severe combat in the Huertgen Forest, had taken large losses, and needed time to integrate new replacements into the ranks. The 106th Infantry Division and 9th Armored Division were both new to combat, the former only entering the front line on 10 December. The Ardennes, Lieutenant General Omar N. Bradley and Lieutenant General Courtney Hodges believed, was the perfect place for these divisions. It was a quiet part of the front line in which nothing much ever happened. For that reason, VIII Corps was the economy of force effort for the Allies in the West. The corps was stretched along an eighty-five mile front, three times the doctrinal distance for a corps in the defense.¹

The terrain of the Ardennes was hardly conducive to mobile armored warfare, which was both the appeal and the
drawback of the area. The Germans had mounted major military operations through the Ardennes in both 1914 and 1940, but those campaigns were fought in the good weather of spring and summer. The Ardennes in the winter is a forbidding place. Only one major avenue of approach, the Losheim Gap in the north, runs east to west. To the south of the Losheim Gap, an area of rugged, wooded hills called the Schnee Eifel ("Snow Mountains") rise at the German border. Running to the rear of the Schnee Eifel south to Luxembourg, the Our River presented an obstacle to vehicular traffic. To the rear of the Our River in the center of the VIII Corps sector, a dominant ridgeline (dubbed "Skyline Drive" by American troops) blocked any easy egress from the river below. The restricted road network in the Ardennes followed the numerous streams and valleys and two towns, St. Vith and Bastogne, formed critical communications hubs in the region. Rugged hills, deep valleys, and the cold and snowy weather in December 1944 made movement difficult, to say the least. Surprise, Adolf Hitler believed, would make up for the drawbacks of the terrain and weather.²

The 28th Infantry Division defended Skyline Drive and the Our River in the center of the VIII Corps sector. During the previous three months the division had sustained 8,959 enlisted and 365 officer casualties, most of them during the abortive attack on Schmidt in the Huertgen Forest in November.³ The division had also lost a great deal of
equipment in the battle of Schmidt. The strength of the American logistical system is evident in the fact that by 16 December the 28th Division had a full complement of authorized equipment and a basic load of ammunition on hand. By comparison, the weakness of the personnel system is shown by the fact that many of the replacements who joined the division were anti-aircraft or anti-tank soldiers who had been retrained and reassigned to the infantry. "A morale problem confronted us from the beginning of the reorganization," recalls William F. Train, who served as the Executive Officer of the 112th Infantry Regiment at the time. Major General Norman Cota used the time available to rehabilitate and train his division as it defended a quiet sector in widely dispersed strongpoints along the Our River. The results of his efforts would soon become apparent.

The 106th Infantry Division, the "Golden Lions," took over the positions of the 2d Infantry Division only a week before the German attack commenced to release the "Indian Head" Division for an attack on the Roer River dams. Major General Alan Jones did not like the exposed positions of two of his regiments on the Schnee Eifel, but Eisenhower, Bradley, and Hodges wanted the salient into Germany held. Americans had paid for that part of the Siegfried Line with their blood and unless there was a compelling reason to give it back, the Golden Lions would stay. As a division
commander in combat for the first time, Jones was not in a good position to argue his case. By the time the Wehrmacht made the case for him, the regiments on the Schnee Eifel would be in danger of encirclement.

At 0530 on 16 December 1944, the VIII Corps front erupted in flame as an artillery barrage marked the start of the German winter counteroffensive. Six divisions—two panzer, three Volks Grenadier (infantry), and one parachute—slammed into the Keystone Division in the center of the VIII Corps sector at odds of roughly five-to-one (Figure 51). Because of the extreme width of its twenty-five mile sector, the 28th Infantry Division fought with three regiments on line and had only one infantry battalion in reserve. German artillery fire disrupted the division's communications network early in the battle. With few reserves at his disposal, there was little General Cota could do to influence the battle anyway.

On the division left, the 112th Infantry Regiment delayed the advance of the LVIII Panzer Corps by thirty-six hours before the 116th Panzer Division could gain a bridgehead across the Our River. The regiment inflicted heavy losses on attacking enemy forces and stayed intact as a fighting organization. Cota wanted the regiment to fall back on Bastogne, but enemy advances soon made this impossible. Instead, the 112th Infantry joined the 106th Infantry Division to its north on 19 December and soon
FIGURE 51
THE 28TH INFANTRY DIVISION SECTOR, 16-19 DECEMBER 1944
became an integral part of the defense of the key communications nexus of St. Vith.  

On the division right, the 109th Infantry Regiment defended behind the Sauer and Our Rivers from 16 to 20 December against the supporting attacks of the 352d Volks Grenadier Division and 5th Parachute Division. On 20 December German pressure finally forced the 109th Infantry Regiment to withdraw south to maintain its link with the 9th Armored Division. By this date the regiment had lost over a quarter of its strength in personnel and most of its heavy equipment. Ammunition expenditures show the intensity of the fighting; in three days the regiment expended 280,000 rounds of small arms ammunition, 5,000 mortar rounds, 3,000 grenades, and 300 bazooka rounds. Most importantly, the regiment had disrupted the attack timetable of the German Seventh Army by four crucial days. American forces on the southern flank of the Bulge—the 4th Infantry Division, the 109th Infantry Regiment, CCA of the 9th Armored Division, and the 10th Armored Division (less CCB which was in Bastogne with the 101st Airborne Division)—firmly jammed the southern shoulder of the Bulge for the remainder of the battle.

In the center of the division, the 110th Infantry Regiment defended with two battalions abreast (the 2d Battalion was in division reserve). The fifteen mile sector and rough terrain mandated the separation of units with the
gaps between covered only by nightly patrols. As a result, the regiment fought for its existence from a series of company strongpoints centered on the Skyline Drive to the west of the Our River.\textsuperscript{10} Despite the overwhelming combat power the enemy 2d Panzer and 26th Volks Grenadier Divisions arrayed against the American troops, companies fought from their strongpoints with dogged determination.

After a day of battle, Cota finally released the 2d Battalion from reserve, but the reinforcement could only delay the inevitable. By the evening of 17 December, German tanks finally overran the regimental command post in Clervaux, but the headquarters company fought from a medieval chateaux in the center of town another eighteen hours before surrendering.\textsuperscript{11} By 18 December the 110th Infantry Regiment ceased to operate as a cohesive unit, having been reduced from 3,117 officers and men to 587 in just two days of combat.\textsuperscript{12} "When men in foxholes refuse to admit overwhelming odds," wrote historian Charles B. MacDonald, "advance through or past them may be inevitable, but it is seldom easy or swift."\textsuperscript{13} Ordered to hold at all costs, the 110th Infantry Regiment was destroyed in battle but gained the crucial hours needed for the Allied command to move the 101st Airborne Division to Bastogne before the Germans arrived.

The determined stand of the 28th Infantry Division helped to give the Allied commanders the time they needed to
move reinforcements to the Ardennes to stem the German tide. For a division that had nearly been annihilated a month earlier in the Huertgen Forest and occupied the widest sector on the Western front, the feat was remarkable. Nowhere had American soldiers fled the battlefield as they had at Schmidt. Despite heavy losses, the division would reconstitute once again after the Ardennes fighting. Between 4 and 16 January 1945, the 110th Infantry received 2,500 replacements and once again began the training process to integrate them into a cohesive organization. The 28th Infantry Division then moved south to fight a tough battle in the Colmar Pocket. Filled with replacements and given time to rest and train, the Keystone Division displayed the resiliency of the infantry divisions of the Army of the United States, not once but twice.

In the northern portion of the VIII Corps sector, the 106th Division had the misfortune of occupying a twenty-seven mile sector which included some of the most exposed positions along the American front line. The German 18th Volks Grenadier Division took advantage of this situation by attacking the northern flank of the 422d Infantry Regiment in the Losheim Gap, a position defended by the relatively weak 14th Cavalry Group (Figure 52). The 293th Infantry Regiment of the 18th Volks Grenadier Division attacked the southern flank of the 423d Infantry Regiment on the southern edge of the Schnee Eifel, a position defended by only a
FIGURE 52
THE 106TH INFANTRY DIVISION SECTOR, 16 – 19 DECEMBER 1944

provisional battalion of relatively weak anti-tank, reconnaissance, and fire support assets. Within twenty-four hours the two pincers of the enemy attack had joined at the town of Schoenberg behind the two American infantry regiments, which were now trapped.15

Only a quick decision by General Jones to withdraw the two exposed infantry regiments from the Schnee Eifel on 16 or early 17 December could have saved them from encirclement. Jones did what he could to halt the German attack by committing his reserve (two infantry battalions) on 16 December, but the lack of an attached tank battalion (a serious deficiency) doomed this weak effort to failure.16 To bolster Jones' position, General Middleton attached Combat Command B of the 9th Armored Division, commanded by Brigadier General William H. Hoge, to the 106th Infantry Division on the evening of 16 December. Middleton also informed Jones that the 7th Armored Division was on its way south and that its first combat command would arrive at St. Vith the next morning.17

Buoyed at first, Jones had increasing doubts as the evening progressed. Late that night, he placed another call to General Middleton in Bastogne and recommended the withdrawal of the two regiments from the Schnee Eifel. "You know how things are up there better than I do," Middleton responded, "but I agree it would be wise to withdraw them."18 By a quirk of fate, Jones only received the first
half of the message, and he put down the phone convinced that Middleton wanted him to hold in place.19 "Well, that's it. Middleton says we should leave them in," Jones told a member of his staff. In Bastogne, Middleton set down the phone and stated, "I just talked to Jones. I told him to pull his regiments off the Schnee Eifel."20 The lack of understanding between Jones and his corps commander sealed the fate of the 422d and 423d Infantry Regiments.

Only a strong counterattack by the armored commands on their way to St. Vith could remedy the predicament of the Golden Lions. Because Middleton and Jones misjudged the arrival time of the 7th Armored Division, however, Jones ordered the first unit to arrive, the CCB of the 9th Armored Division, to counterattack towards Winterspelt to relieve the pressure on the hard-pressed 424th Infantry Regiment.21 Unfortunately, the lead elements of the 7th Armored Division, delayed by massive traffic jams, did not reach St. Vith until the afternoon of 17 December, by which time the German pincers had closed around the Schnee Eifel at Schoenberg.

Confusion reigned in the headquarters of the 106th Infantry Division. Instead of synchronizing the various assets available to the division, the staff panicked and proved incapable of even controlling the traffic clogging St. Vith, much less coordinating a counterattack to relieve the regiments encircled on the Schnee Eifel.22 On the
crucial day of 17 December, the division staff packed up and moved from St. Vith to Vielsalm, thereby throwing the entire organization into mass confusion. No one on the staff had a clear picture of the positions of either enemy or friendly forces in division's sector. The most powerful asset at the Americans' disposal was the big guns of the numerous corps artillery battalions in the area, but lack of central coordination by the division artillery prevented the massing of fires on critical targets. Only a gallant stand by the 81st Engineer Battalion and part of the 168th Engineer Battalion fighting as infantry prevented the Germans from taking St. Vith on 17 December.

To Brigadier General Bruce C. Clarke, whose Combat Command B was the first unit of the 7th Armored Division to arrive at St. Vith, General Jones' behavior seemed odd. Jones repeatedly expressed concern over the fate of his son, a staff officer in the 423d Infantry Regiment, trapped on the Schnee Eifel. Finally, Jones told Clarke, "I've thrown in my last chips. I haven't got much, but your command is the one that will defend this position. You take over command of St. Vith right now." Jones outranked Clarke by one star, yet was relinquishing command to him. Furthermore, Clarke was junior to every other general officer in the St. Vith area, which included not only the 106th Infantry Division but CCB of the 9th Armored Division, CCB of the 7th Armored Division, and the 112th Infantry
Regiment from the 28th Infantry Division. In the ensuing days, Clarke's leadership would be tested as never before. St. Vith would be the finest hour in his distinguished career.

For the 422d and 423d Infantry Regiments in the Schnee Eifel, the end came rapidly. Although the regiments held strong positions and had adjusted them for all-around defense, they had only a limited amount of ammunition and other supplies. Bad weather and poor staff coordination eliminated any chance of large-scale aerial resupply. If the American units holding St. Vith could not attack to open a corridor to the trapped units, Jones concluded early on 18 December, then the infantry regiments would have to try to break out on their own. Colonel Charles C. Cavender and Colonel George L. Descheneaux complied with their division commander's order and attacked at 1000 hours. For units that had just entered combat and had a large number of poorly trained replacements in them, the mission was too challenging and the opposition too powerful. Nearly out of ammunition and food, both regiments surrendered to the enemy on 19 December, the largest mass surrender of American forces in World War II. Altogether, over 6,800 soldiers in the 106th Infantry Division either surrendered or were captured during the battle. The devastation was so complete that American leaders decided not to reconstitute the division after the battle.
The historian of the 106th Infantry Division blames the division's fate on the stripping of the unit for replacements prior to its entry into combat. This explanation is appealing, but incomplete. When the Germans attacked the division on 16 December, those units engaged fought as well as one could expect given their state of training and lack of combat experience. The 424th Infantry Regiment, which escaped encirclement and fought in the subsequent defense of St. Vith, developed into a solid unit by the end of the Battle of the Bulge. A quick decision to withdraw the 422d and 423d Infantry Regiments from the Schnee Eifel on 16 or early 17 December would have saved them from their eventual fate and allowed them to develop their combat potential in subsequent battles.

The inability of General Jones and his division staff to make timely decisions and synchronize the combat power at their disposal caused the defeat of the 106th Infantry Division. One cannot ascribe this problem to the stripping of the division for replacements, for the division staff remained intact throughout the unit's pre-combat training in the United States. Jones was not mentally prepared to lead his division in combat. He did not control his staff in the heat of battle, failed to make timely decisions, and constantly vacillated in his positions when discussing matters with his corps commander. Even after the encirclement of two of his regiments in the Schnee Eifel,
Jones had an entire division’s worth of combat power at his disposal (424th Infantry Regiment, CCB of the 9th Armored Division, 112th Infantry Regiment from the 28th Infantry Division, plus his divisional artillery), but he failed to coordinate it and instead turned the battle over to Clarke, the most junior general officer (but also the most experienced combat commander) in St. Vith.32

Ultimately, Jones’ decision to relinquish command was his greatest contribution to the battle, for Clarke fought an outstanding mobile defense which held the Germans in the St. Vith area for several crucial days while the Allied high command rushed reinforcements to the Ardennes. Jones was not present to witness the triumph of American forces in the subsequent fighting. On 22 December, Major General Matthew B. Ridgway, commander of the XVIII(US) Airborne Corps, relieved him of his command. Soon afterwards, Jones collapsed from a heart attack and was evacuated from the battlefield.33 Perhaps had the Ardennes remained the quiet front it was prior to 16 December, Jones would have had time to acclimate himself and his division to combat operations. Instead, the cruel hand of fate determined that after twenty-seven years of service and promotion to one of the premier positions in his profession, Jones would survive less than two weeks in combat.

To the north of St. Vith, the German Sixth Panzer Army conducted the enemy’s main attack toward the Meuse River
(Figure 53). The 1st SS Panzer Corps attacked on 16 December with the 3d Parachute Division, the 12th and 277th Volks Grenadier Divisions, and the 1st and 12th SS Panzer Divisions. In their path stood the 99th Infantry Division, commanded by Major General Walter E. Lauer, which had only arrived on the Continent the previous month. Like the 106th Infantry Division to its south, the 99th Infantry Division was put in the Ardennes to gain experience. The enemy plan was to use the three infantry divisions to penetrate the American lines to create a hole through which the panzer divisions would exploit.

The initial German attack struck hard at the 99th Infantry Division, which for the most part held up well against the enemy onslaught. Only on the division's southern flank, which was loosely tied in with the 14th Cavalry Group in the Losheim Gap, did the enemy penetrate the division's lines in great strength. A kampfgruppe composed primarily of the 1st SS Panzer Regiment of the 1st SS Panzer Division, led by Obersturmbannfuehrer Joachim Peiper, exploited through this gap on 17 December, accompanied by dismounted infantry from the 3d Parachute Division.

As Peiper's column headed west towards its assigned objectives on the Meuse River, the 99th and 2d Infantry Divisions fought stubbornly to ensure that other enemy columns would not be able to duplicate Peiper's feat. The
NOTE: U.S. UNIT SYMBOLS DEPICT UNIT LOCATIONS ON THE NIGHT OF 19 DECEMBER.

FIGURE 53
THE SIXTH PANZER ARMY ATTACK, 16-19 DECEMBER 1944
2d Infantry Division, in particular, found itself in quite a predicament. The division had begun an attack towards the Roer River dams on 13 December along a narrow axis to the north of the 99th Infantry Division. The Indianhead Division's line-of-communication ran down a single road parallel to enemy lines and through the 99th Infantry Division's sector. Only quick action by the veteran division commander of the 2d Infantry Division, Major General Walter M. Robertson, saved the division from disaster. On the first day of the German counteroffensive, Robertson suspended his division's attack and ordered his units to prepare for withdrawal from their exposed positions.38

On the morning of 17 December, General Hodges, finally convinced that the German counteroffensive was more than just a local reposte, belatedly gave his permission for Robertson to conduct a withdrawal. The call almost came too late. The lone withdrawal route for the 2d Infantry Division ran through the twin villages of Rocherath and Krinkelt, which were also the key objectives for the 277th Volks Grenadier Division and the newly committed 12th SS Panzer Division. The survival of the Indianhead division depended on the ability of American troops to hold these two villages until the division could withdraw through them to more defensible positions along Elsenborn Ridge to the west. The task fell to the embattled 393d Infantry Regiment of the
99th Infantry Division and the 3d Battalion, 23d Infantry Regiment of the 2d Infantry Division.  

Late in the morning on 17 December, General Lauer gave his permission for the 393d Infantry to withdraw from its positions to the east of 3/23 Infantry. For four hours, this lone infantry battalion, under orders to hold at all costs, held its ground to allow the bulk of the 2d Infantry Division to pass to its rear. For this feat the valiant defenders earned a Distinguished Unit Citation and two Medals of Honor. General Robertson spent the entire day pushing his troops along the road to safety and fashioning another defensive line to the east of the twin villages with troops from the 1st Battalion, 9th Infantry Regiment and Company K, 3/9th Infantry. To bolster this line, General Robertson gave priority of fires to 1/9th Infantry. Backed up by the fires of three battalions of 105mm howitzers and four battalions of heavy 155mm howitzers, 1/9th Infantry held its position long enough for the remainder of the 2d Division to escape the German trap.

After the withdrawal of the 2d Infantry Division to the twin villages of Rocherath and Krinkelt, the immediate danger of another breakthrough in the V Corps sector passed. On 20 December a relieved General Hodges wrote to General Robertson, "What the 2d Infantry Division has done in the last four days will live forever in the history of the United States Army."

Indeed, the difference between the
quick actions of General Robertson to save his division and
the inaction of General Jones of the 106th Infantry Division
is striking. Ironically, the 2d Infantry Division had
occupied the Schnee Eifel until the Golden Lions assumed
control of the sector to release the Indianhead division for
its offensive mission. One is left to ponder whether
Robertson would have withdrawn from the Schnee Eifel in time
to save the regiments positioned there. Certainly, the
presence of a veteran division under the command of a
seasoned leader would have caused the battle around St. Vith
to develop in a much different manner than it did.

To ensure the northern flank held, the 1st and 9th
Infantry Divisions quickly moved south to take up positions
on the flanks of the 2d and 99th Infantry Divisions. By
daylight on 20 December, the 2d and 99th Infantry Divisions
were firmly ensconced on Elsenborn Ridge, the high ground to
the west of the twin villages. Each of these divisions
occupied a narrow sector, which allowed them to prepare
defenses in depth. As importantly, three of the best
infantry divisions in the ETO were now firmly planted in the
path of the German main effort.

The next day the 12th SS Panzer Division launched one
of the strongest attacks yet against the American forces on
the northern shoulder. The 25th Panzergrenadier Regiment
and a tank battalion from the 12th SS Panzer Regiment,
supported by artillery and rocket launchers, attacked the
positions of 2d Battalion, 26th Infantry Regiment of the 1st Infantry Division near Dom Butgenbach. The battalion commander, Lieutenant Colonel Derrill M. Daniel, called for indirect fires in front of his positions. As usual, American artillerymen responded by massing the fires of all battalions within range: eight battalions from the 1st and 2d Infantry Divisions, one battalion from the 99th Infantry Division, three battalions from V Corps, and a battalion of 4.2 inch mortars. The artillery fired more than ten thousand rounds in support of Daniel's battalion.

The result was devastating. Coupled with the courageous actions of infantry, tanks, and tank destroyers, the massed artillery fire enabled 2/26th Infantry to repel the German assault. The enemy forces left nearly 800 dead soldiers and 47 tanks and tank destroyers on the battlefield, while American losses amounted to 250 men, 5 anti-tank guns, and 4 tanks and tank destroyers. The courageous stand by Daniel's men is even more remarkable in light of the fact that the two units most heavily engaged, Companies E and F, "had been virtually wiped out" three weeks earlier in fighting in the Huertgen Forest. This battle once again illustrates the ability of American infantry divisions to reconstitute quickly even after suffering devastating losses in combat. Backed by the tremendous firepower of massed artillery, the four divisions on the northern flank of the Bulge held the German forces
facing them in check for the duration of the battle.

The German Sixth Panzer Army had missed a huge opportunity during the first days of the fight. Had the 1st SS Panzer Division attacked north after its breakthrough in the Losheim Gap, it would most likely have surrounded both the 2d and 99th Infantry Divisions in their exposed positions to the east of Elsenborn Ridge. Another option would have been to move the 12th SS Panzer Division south to follow the 1st SS Panzer Division through the Losheim Gap and expand the breakthrough. By adhering inflexibly to their original plan of attack, the German commanders allowed the American commanders the time they needed to move reinforcements to the Ardennes and restore the continuity of their defensive positions. The only unit in the Sixth SS Panzer Army to break through American lines was Kampfgruppe Peiper of the 1st SS Panzer Division. The German main effort had clearly failed, a fact confirmed when the German high command shifted the schwerpunkt of the offensive to the Fifth Panzer Army on 20 December. The credit belongs primarily to the 1st, 2d, 9th, and 99th Infantry Divisions and to their supporting artillery, tanks, and tank destroyers.

The task of destroying Kampfgruppe Peiper fell to the 30th Infantry Division, the 82d Airborne Division, and CCB of the 3d Armored Division. An improvised defense by combat engineers, who blew the bridges Peiper needed to exit the
Ambleve River valley, trapped the kampfgruppe on 18 December. Observation aircraft from First U.S. Army pinpointed Peiper's positions by evening. General Hodges directed the commander of the 30th Infantry Division, Major General Leland Hobbs, to move his division south to engage Peiper's forces and secure the northern flank of the Bulge from Malmedy west to Stoumont. Hobbs' division was fully combat effective since it had just finished several weeks in a narrow defensive sector that allowed the rotation of units for rehabilitation, maintenance, and small unit training; additionally, the division was at 97 percent of its authorized personnel strength. The 82d Airborne Division also arrived on the battlefield on 19 December and established a firm blocking position to the west of Peiper's column. With the help of CCB of the 3d Armored Division, the 30th Infantry Division and the 82d Airborne Division would destroy Kampfgruppe Peiper in the next few days.

The first task faced by the Americans was to cut Peiper's line-of-communication. The 1st Battalion, 117th Infantry Regiment of the 30th Infantry Division achieved this objective by attacking and seizing the town of Stavelot on 18-19 December. Cut off from both reinforcements and supplies (especially fuel), Kampfgruppe Peiper could not maneuver out of the trap in which it found itself. American units closed in for the kill. Task Force Lovelady cut the German line-of-communication in another place near Trois
Ponts, the 82d Airborne Division erased a German bridgehead over the Ambleve at Cheneux, and the 119th Infantry Regiment fought a bitter battle against the spearhead of Peiper's force at Stoumont. Constricted terrain made concentration of forces difficult, but American artillery fire was enhanced by the use of new, highly secret proximity fuzes which caused shells to explode above their targets (creating the dreaded "airburst" that made artillery fire so deadly in the Huertgen Forest). On the night of 23-24 December, Peiper and eight hundred of his men left their vehicles and wounded behind and withdrew from the shrinking pocket on foot. Although Peiper and his men were soon back in action with the remainder of their division, American units had effectively destroyed the 1st SS Panzer Regiment.

With the main attack by the Sixth Panzer Army contained, the fate of the battle now rested with the Fifth Panzer Army and the American forces in the southern and western portions of the Bulge. While American forces in the west (2d, 3d, and 7th Armored Divisions, and the 75th and 84th Infantry Divisions) blunted the spearhead of the German attack, Lieutenant General George S. Patton's Third U.S. Army wheeled ninety degrees to counterattack the enemy salient from the south and relieve the encircled 101st Airborne Division at Bastogne. The value of Allied air superiority now made itself felt as the divisions of Third Army moved north along clogged roads.
"jammed," one truck driver in the 26th Infantry Division later recalled. "Us and the Fourth Armored and God only knows how many other divisions. We were bumper to bumper all the way."\textsuperscript{51}

III(US) Corps (4th Armored Division and 26th and 80th Infantry Divisions) began the counterattack on 22 December. All three divisions were combat experienced and were in quiet sectors or reserve positions when called upon to move north.\textsuperscript{52} The 4th Armored Division conducted the main attack from Arlon north towards Bastogne, while the 26th and 80th Infantry Divisions conducted supporting attacks to clear the ground to the east of the main effort (Figure 54). While the 4th Armored Division ran into stubborn defenses manned by the German 5th Parachute Division, the two infantry divisions advanced unopposed until they hit the 352d Volks Grenadier Division in the flank. The Germans reacted quickly by moving the Fuehrer Grenadier Brigade and the 79th Volks Grenadier Division into the fight. In a brutal slugging match in extremely rough terrain, the 26th and 80th Infantry Divisions managed to reach the southern bank of the Sure River by 26 December, the same day that the Reserve Command of the 4th Armored Division relieved Bastogne.\textsuperscript{53}

By 26 December, the crisis in the Bulge had passed. Clear weather brought out Allied fighter-bombers in droves to pummel German motorized columns from the air. Allied
FIGURE 54
THE III CORPS COUNTERATTACK TO RELIEVE BASTOGNE, 22-26 DECEMBER 1944
commanders had massed enough combat power in the Ardennes not only to stop the German drive, but to attack the German forces in the Bulge to regain lost ground and to destroy the bulk of the enemy's mobile reserve forces. From that point on, final Allied victory became inevitable within a matter of months—a victory made possible in large measure by the valor and sacrifice of a relative handful of American divisions positioned as an economy-of-force measure in a supposedly "quiet" part of the Western Front in December 1944. These divisions (2d, 4th, 28th, 99th, and 106th Infantry Divisions; 9th and 10th Armored Divisions) bought the time the Allied high command needed move reinforcements to the Ardennes to stem the German tide. First and Third Armies then capitalized on their strengths—massed firepower, air superiority, superior mobility, and inexhaustable logistics—to defeat the German forces in the Bulge and regain lost territory. That they did not accomplish more than that one can attribute to the lack of creativity among the senior Allied commanders in crafting an operational design to reduce the Bulge.

The Battle of the Bulge also marked the last manpower crisis for the Army of the United States. On 20 December SHAEF ordered 2,000 privates stripped from the 42d, 63d, and 70th Infantry Divisions in the 6th Army Group for use as replacements for the Third U.S. Army. The infantry regiments of these divisions had been shipped earlier from
the United States without the other divisional components in order to compensate for the shortage of infantry in the ETO. On Christmas Day SHAEF stripped 25 percent of the enlisted strength from the three infantry regiments of the 69th Infantry Division (newly arrived from the United States) for use as replacements for the First and Ninth U.S. Armies. These emergency measures clearly could not continue without endangering the combat effectiveness of the infantry divisions in the ETO.

General Eisenhower became extremely concerned over his lack of reserves and took steps to resolve the situation. He asked the Army Chief of Staff, General George C. Marshall, to send more forces to the ETO. The Joint Chiefs of Staff complied by accelerating the departure of three infantry, one airborne, and three armored divisions to Europe. The ETO also needed more replacements to fill shortages, especially in infantry divisions. Marshall had earlier ordered the Zone of the Interior in the United States to strip its training installations for replacements. Eisenhower now forced the Communications Zone in the ETO to do likewise through the creation of a U.S. Theater Manpower Section, responsible directly to the Supreme Allied Commander, empowered to supervise and control the conversion of support soldiers to infantrymen. Eisenhower called for volunteers from segregated black support units to fill the need for more infantrymen. The response was so great
that by February 1945, 4,462 African-American soldiers had volunteered, to include many noncommissioned officers who accepted reductions in rank to do so. By the end of the war, black infantry platoons served honorably and competently side-by-side with white soldiers in many American infantry companies in Europe. By the time the 12th Army Group had erased the bulge in its lines at the end of January 1945, the solution to the manpower crisis in Europe was not far off.

By that date, the European Theater of Operations had also finally overcome its logistical crisis. The opening of Antwerp to traffic, the restoration of rail and road links in France, and the relative stability of the front line had finally allowed the Communications Zone to organize logistical support of the American armies on a more permanent basis. The final offensive into Germany would be sustained by "a highly complex, technical, and skilled logistical apparatus" that more than fulfilled the needs of the combat forces as they overran the ashes of the Third Reich. The logistical tail of the Army of the United States sustained combat effectiveness by funneling the abundance of American industrial might into America's combat forces. One must agree with the view of the official U.S. Army historian who wrote that the final offensive into Germany was "a logistical tour de force by the most highly motorized and mechanized armies the world had ever
The major obstacles that stood in the path of the Allied advance into the heart of Germany in February 1945 were the great river barriers of the Roer and the Rhine. The German forces that defended the Reich were a shell of their former selves. Although enemy factories still produced ammunition and equipment in limited quantities, German manpower reserves were dwindling. The Wehrmacht could neither reconstitute the mobile reserves wasted in the ill-fated Ardennes counteroffensive nor adequately sustain existing forces with replacements and fuel. What reserves there were went east to fight the advancing Red Army, which opened its winter offensive on 12 January. Nevertheless, German soldiers continued to fight, spurred on by ruthless discipline and the fact that they were defending their own soil.

Before the Ninth U.S. Army could cross the Roer, American forces would have to control the Urft and Schwammenauel dams upriver. Should Allied forces cross the Roer with these dams still in enemy hands, they risked being cut off in the event that the Germans destroyed the dams, thus releasing a flood of water that would destroy the bridges used for supplies and reinforcements. These dams were the ultimate objectives during the bloody fighting in the Huertgen Forest in 1944. At the end of the Battle of the Bulge, they were still under German control.
The mission of seizing the Schwammenauel Dam would fall to the 78th Infantry Division. Instead of attacking the dam directly through the Huertgen Forest, the division would advance along a plateau from Monschau northeast towards Schmidt, then turn south to seize the objective. In its first combat operation, the division had attacked along this same avenue from 13 to 16 December, but the German counteroffensive forced a halt to operations.\textsuperscript{62} Seven weeks later, the division resumed its attack against the same foe, the 272d \textit{Volks Grenadier} Division.

The operation against the Roer dams began auspiciously when the 9th Infantry Division seized the Urft Dam intact on 4 February (Figure 55). The 78th Infantry Division attacked the next day and made good progress. The 309th Infantry Regiment caught the enemy by surprise and opened a penetration in the enemy's defensive belt. Unfortunately, conflicting orders of the division commander, Major General Edwin P. Parker, Jr., and the V(US) Corps commander, Major General Clarence R. Huebner, caused confusion among the attacking regiments and delayed exploitation. The next day the 310th Infantry Regiment entered the fight, but encountered many of the same problems of attacking in deep woods that other American units had experienced earlier in the Huertgen Forest and suffered similar consequences. On 7 February, General Parker committed all three of his regiments to the attack, which made good progress.
FIGURE 55
THE CAPTURE OF THE ROER RIVER DAMS, 5–9 FEBRUARY 1945
Supported by the 744th Tank Battalion, the 311th Infantry Regiment entered Schmidt, which it finally cleared of enemy the next day.63

Despite the progress made so far, General Hodges at First U.S. Army was unhappy with the pace of the advance. At V Corps, Huebner felt the problem might be the inexperience of the 78th Infantry Division headquarters. On 8 February, he ordered Major General Louis A. Craig to move the 9th Infantry Division headquarters and two infantry regiments to Schmidt to take control of the battle. Huebner then attached the 309th and 311th Infantry Regiments to Craig's division. The veteran staff of the 9th Infantry Division reacted quickly and by midnight the forces were in place in Schmidt to continue the attack. The attack the next day made slow progress, but reached the Schwammenauel Dam at midnight. Although the Germans did not destroy the dam, they damaged the discharge valves and thus released a steady flow of water which they hoped would forestall an Allied offensive for several weeks.64 With the objective in hand, Huebner could look on the actions of the 78th Infantry Division with more objectivity. The inexperienced division had accomplished a tough mission under difficult circumstances which had eluded several other divisions over a period of months. Happy at last, Huebner remarked to Hodges that he had "made him another good division."65
With the Roer dams under American control, Ninth U.S. Army and VII Corps of the First U.S. Army could finally launch Operation GRENADE, the assault crossing of the Roer River. Lieutenant General William H. Simpson, the army commander, set D-day for 23 February to allow enough time for the worst of the flooding downriver to recede. Six infantry divisions (8th, 29th, 30th, 84th, 102d, and the 104th Infantry Divisions) were to assault across the river at night under the cover of smoke and artillery fire from 2,000 guns, which would batter enemy defenses for 45 minutes prior to H-hour. Although the crossing did not go smoothly due to the rapid current and preregistered enemy artillery fire, all divisions were able to reach the far bank and carve out bridgeheads. By the end of D+1 bridgehead strength equaled thirty-eight battalions of infantry, supported by armor and artillery. During the next two weeks Ninth Army advanced fifty-three miles from the Roer to the Rhine, while capturing approximately 30,000 German soldiers in the process. The first great river barrier had fallen.

The Rhine River was the last place the battered Wehrmacht could gain a major defensive advantage against the advancing Allied armies. While Field Marshal Bernard Montgomery's 21st Army Group planned an elaborate deliberate attack to assault the river barrier, General Bradley ordered the 12th Army Group to launch Operation LUMBERJACK to bring
the First and Third U.S. Armies to the river's edge. During the course of this operation, American forces would show their flexibility by crossing the Rhine in several places before the Germans could establish an effective defense along the eastern bank.

On 7 March 1945 troops from Combat Command B of the 9th Armored Division, under the command of William M. Hoge, seized intact the Ludendorff railway bridge over the Rhine River at Remagen (Figure 56). Bradley and Hodges immediately decided to reinforce the 9th Armored Division, and Major General John Milliken of III(US) Corps sent the 9th Infantry Division and 78th Infantry Division to Remagen to hold and expand the bridgehead there. Less than three years previously, the 9th Infantry Division had trained the cadre for the 78th Infantry Division. Now the two divisions were to serve side-by-side in combat. The battle of the Remagen bridgehead was the supreme test for the 9th Infantry Division, the culmination of all its training and combat experiences during the war.

On 9 March the 9th Infantry Division assumed control over the entire bridgehead east of the Rhine River, and for several days the division staff in effect acted as a corps headquarters to control the operations of the three divisions in the bridgehead. The division G-4 became the coordinating agency for the movement of supplies across the Rhine River. The G-4 traffic section controlled all
FIGURE 56
THE REMAGEN BRIDGEHEAD, 7–24 MARCH 1945
movement within the bridgehead and established traffic control points on the western approaches to Remagen. The military police platoon earned a rare Distinguished Unit Citation (especially for a military police unit) for its actions in keeping traffic moving over the Ludendorff Bridge under fire. Likewise, the 9th Signal Company earned a Distinguished Unit Citation for its efforts in keeping communications lines across the bridge intact, despite the intense enemy artillery fire and bombing which constantly cut them. The division artillery controlled all indirect fires to the east of the Rhine River. At one point Brigadier General Reese M. Howell, the artillery commander, had seventeen battalions of artillery firing under his command. Only an experienced division staff could handle these assignments, and the staff of the "Old Reliabes" stood up to the test.  

In bitter fighting, the 9th Infantry Division attacked to expand the bridgehead to the east, while the 78th Infantry Division attacked to the north and the armored infantry of the 9th Armored Division and the 99th Infantry Division attacked to the south. In the center of the bridgehead, the 47th Infantry Regiment of the 9th Infantry Division fought one of the bloodiest actions in its history when it held off counterattacks by the 9th and 11th Panzer Divisions. The 9th Infantry Division chief of staff, Colonel William C. Westmoreland, called the 47th Infantry
the "keystone in the arch" that kept the Remagen bridgehead from collapsing, words later included in the Distinguished Unit Citation awarded to the regiment for its actions.72 Casualties again rose to the levels of Normandy and the Huertgen Forest:

The losses of the 47th [Infantry Regiment] in the Remagen Bridgehead were appalling, and none but a veteran organization could have taken them and gone on fighting. Platoon leaders saw entire platoons annihilated in pushing up to the high, commanding ground on the east bank. Company commanders saw entire companies dissolve right before their eyes. Battalion commanders began to consider themselves lucky if they could muster one good company out of an entire battalion.

After the first couple of days in this almost suicidal-type battle, the sight of an officer in a rifle company was rare, because most of them were gone.73 The Germans suffered more than the Americans, however, and they eventually ran out of reserves to throw into the fight. By 16 March the 1st Infantry Division had crossed the Rhine and Hodges had ordered VII Corps to assume control of half of the bridgehead. When First Army attacked to break out of the bridgehead on 25 March, it had three corps, six infantry divisions, and three armored divisions across the Rhine River.74

Patton's Third U.S. Army also crossed the Rhine River without elaborate attack preparations. After overrunning the Saar-Palatinate region south of the Moselle and west of the Rhine River, the Patton sought to breach the Rhine in-stride to maintain the momentum of his attack. The unit chosen to cross the Rhine was the 5th Infantry Division,
commanded by Major General S. LeRoy Irwin. River crossings had become something of a specialty for the Red Diamond Division; the Rhine would be the twenty-third river crossing for the division since landing in France. Irwin received his orders to cross the Rhine only hours before execution. If the timing caught him by surprise, the Germans were even more befuddled.

At 2230 hours on 22 March, the first assault boats started across the Rhine River at Oppenheim and Nierstein (Figure 57). To maintain surprise, no artillery preparation heralded the assault, although thirteen artillery battalions were ready to fire on-call. At Nierstein surprise was total, while at Oppenheim the 1st Battalion of the 11th Infantry Regiment overcame enemy resistance after a short, sharp fight. By midnight the entire regiment had crossed the vaunted obstacle of the Rhine River at the cost of twenty casualties. By the afternoon of 23 March three infantry regiments supported by tanks and tank destroyers were across the river and a class 40 treadway bridge had been installed. The crossing was so successful that Major General Manton S. Eddy, commander of the XII(US) Corps, ordered the 4th Armored Division to cross into the bridgehead the next day. German weakness is evidenced by the fact that the only unit the enemy could muster to counterattack the bridgehead was a regiment formed from students of an officer candidate school in Wiesbaden.
FIGURE 57
THE RHINE RIVER CROSSINGS IN THE SOUTH, 22-28 MARCH 1945
They attacked with great elan and were destroyed with even greater firepower.

On 25 March the First and Third U.S. Armies exploded out of their bridgeheads across the Rhine, while further south the 3d and 45th Infantry Divisions of the Seventh U.S. Army crossed the Rhine at Worms the next morning. In the north, Montgomery's 21st Army Group had crossed the Rhine on 24 March with a massive deliberate attack that easily overcame enemy resistance. Stunned German forces could do nothing to halt the onslaught which soon encircled over 300,000 enemy soldiers in the Ruhr industrial region and sent Allied forces deep into the heart of Germany to meet the advancing Red Army along the Elbe River. Crushed by the weight of Allied power, the Third Reich succumbed to the inevitable on 8 May 1945.

Only eleven months had elapsed since the great invasion of Normandy, but in that short space of time the Army of the United States had earned five campaign streamers on the road to victory. The final offensive that swept Allied forces into the heart of Germany produced few new insights in American doctrine, tactics, techniques, and procedures; what the campaign did display was the ultimate effectiveness of the American fighting machine at its prime. By his deeds the American fighting man had proven that democracies do not necessary produce inferior soldiers. Indeed, American divisions had shown a great capacity to learn from their
early mistakes and an enormous resiliency that kept them combat effective despite the sacrifices they endured. In the spring of 1945, the Army of the United States reached the zenith of its power and effectiveness as it helped to destroy the last remnants of the once vaunted Wehrmacht, a fitting tribute to the vision of General George C. Marshall and the other senior leaders who worked to realize it. America's army had come of age.
ENDNOTES


3. HQ, 28th Infantry Division, "Operational Data, 28th Inf. Div., 6 June 1944-11 May 1945," File 328-0.3.0, Box 8480, Record Group 407, National Archives, MMRB.

4. HQ, 28th Infantry Division, "Unit Report No. 6," 15 January 1945, p. 8, File 328-0.3, Box 8479, Record Group 407, National Archives, MMRB.


9. Ibid., 224.

10. "History of the 110th Infantry Regiment from Activation on 17 February 1941 to Inactivation on 25 October 1945," p. 63, File 328-INF(110)-0.1, Box 8596, Record Group 407, National Archives, MMRB.

11. Ibid., 41-42.

12. Ibid., 73.


16. Normally, an American infantry division would have a tank battalion attached from army reserves, but there were not enough to attach one to every infantry division in the ETO. The low priority of the Ardennes meant that the
infantry divisions of VIII Corps did not have this vital support on 16 December.

17. MacDonald, A Time for Trumpets, 126.

18. Ibid., 128-29.

19. Ibid., 128. Apparently the switchboard operator briefly disconnected the line in the middle of Middleton's sentence to put another incoming call on hold.


24. HQ, 81st Engineer Combat Battalion, "81st Engineer Combat Battalion History, 16 Dec 1944 - 1 Feb 1945," n.d., 1-16, File 3106-ENG-0.1, Box 14749, Record Group 407, National Archives, MMRB.

25. Morelock, Generals of the Ardennes, 299.


27. The division's after-action report maintains the fiction that Jones' had merely given Clarke command of a portion of the division sector, but in the ensuing days Clarke exercised command over the entire St. Vith battlefield. HQ, 106th Infantry Division, "Action Against Enemy, Report After," 27 January 1945, p. 3, File 3106-0.3, Box 14718, Record Group 407, National Archives, MMRB.

28. William J. Dunkerley, "German Breakthrough in the ARDENNES," 3 May 1945, File CI-244, Box 24081, Record Group 407, National Archives, MMRB; John G. Westover, "423 Infantry Regiment in the Ardennes Battle," 17 April 1945, File CI-245, Box 24081, Record Group 407, National Archives, MMRB.


31. HQ, 424th Infantry Regiment, "Submission of Historical Material," 3 August 1945, File 3106-INF(424)-0.1, Box 14758, Record Group 407, National Archives, MMRB; Dupuy, Lion in the Way.

32. Morelock, Generals of the Ardennes, 300.

33. Ibid., 311.


35. Ibid., 81.


39. Ibid., 375-77.

40. For an excellent first-person account of this action, see Charles B. MacDonald, Company Commander (New York: Bantam, 1978), 108-35.

41. MacDonald, A Time for Trumpets, 380-83, 395-97. 1/9th Infantry began the battle with around 600 men and lost nearly 400 of them in action in approximately twenty hours of intense combat.


43. MacDonald, A Time for Trumpets, 406.

44. Ibid., 408.

45. Ibid., 407. Lieutenant Colonel Daniel received the Distinguished Service Cross for his actions during the battle.


48. HQ, 30th Infantry Division, "After Action Report, 1 November 1944 - 30 November 1944," G-1 Annex, File 330-1, Box 8732, Record Group 407, National Archives, MMRB; idem,


50. Ibid., 376-77. One witness described the aftermath of the ferocious battle between the 30th Infantry Division and Kampfgruppe Peiper: "The devastation, destruction and immobilization of equipment was unbelievable, for the 30th, attacking in three columns, caught a German panzer division in the flank, destroying the lead elements, the reserve and the trains in three separate engagements. The towns of Stoumont, La Gleize, and Stavelot were practically demolished by the battles there." William F. Train, Oral History, 18-19, The William F. Train Papers, USAMHI, Carlisle Barracks, PA.


55. Ibid.

56. MacDonald, A Time for Trumpets, 604.

57. Ruppenthal, Logistical Support of the Armies, 326.


59. Ibid., 695-96. In a study of the American soldier in combat, Samuel A. Stouffer and his researchers concluded: "In the companies in which Negro platoons served, the overwhelming majority of white officers and men gave approval to their performance in combat." Samuel A. Stouffer, et al., eds., The American Soldier, Vol I: Adjustment During Army Life (Princeton: Princeton University Press, 1949), 588-89.


61. Ibid., 480.


64. Ibid., 81-82.

65. Ibid., 83.

66. Ibid., 142.

67. Ibid., 163.

68. Ibid., 183.


74. MacDonald, *The Last Offensive*, 234.

75. Ibid., 267.

76. Ibid., 270.

77. Ibid.

78. Ibid., 272.
CHAPTER X

THE COMBAT EFFECTIVENESS OF INFANTRY DIVISIONS

IN THE ARMY OF THE UNITED STATES

Given the resource constraints under which it operated, the Army of the United States did a credible job in developing the large number of combat formations required to fight a global war. The most important limitation by far was time. The United States was the last major combatant to enter World War II and did so at a relatively low level of mobilization. Production of equipment for lend-lease competed with the needs of combat divisions and air groups. Construction of training facilities took place simultaneously with the activation of numerous new military formations. Personnel needs of the services competed with each other and with the needs of war industries. As a result of this turmoil, new divisions took a longer time to organize and train than called for by the mobilization training plan and the Army eventually had to scale back the number of divisions it activated to eighty-nine. Despite these drawbacks, the process of creating new divisions was, for the most part, sound.

Army Ground Forces under Lieutenant General Lesley J. McNair attempted to create each combat division with the
same "mold" to ensure that they were equally combat effective. On the whole Army Ground Forces succeeded in developing divisions that could attain an adequate level of effectiveness after their initial battles, but few divisions were fully effective upon their entry into combat. Nor were all divisions created equal; some divisions were clearly more combat effective than others. These differences were a function primarily of the leadership exercised by the division commander and combat experience, but experience alone could not make a division effective. The 90th Infantry Division had plenty of experience in Normandy by the end of July 1944, but only after Major General Raymond McLain took command did the division finally become a combat effective organization. Too much combat experience could also lower the combat effectiveness of divisions by creating large-scale losses and demoralization.

The combat divisions of the Army of the United States were not static organizations. Divisions changed over time as leaders changed, casualties left and replacements arrived, combat taught new lessons, and units trained to new standards. The experience of the 9th Infantry Division illustrates this point. The division arrived in North Africa as an untested organization and showed its weaknesses in its first battles. Under Major General Manton Eddy's leadership, the division learned from its mistakes and became a veteran outfit. The division reached a peak of
effectiveness during the campaign in the Cotentin Peninsula, before the huge losses of the hedgerow fighting and the Huertgen Forest depleted its ranks. After integrating replacements in November 1944, the division spent three months on relatively quiet sectors of the front, which kept losses low. By the time it underwent its next crisis at the Remagen Bridge, the division was once again at a peak of effectiveness.

The cyclical nature of combat effectiveness in the 9th Infantry Division was common to most of the divisions that fought in the European Theater of Operations. Without a system of unit rotation, too many units spent too much time in combat. The primary problem was a lack of divisions, which forced commanders to keep units in the line long past the time after which they should have been withdrawn and reconstituted. Instead, personnel managers funneled hundreds of thousands of individual replacements to divisions in contact with the enemy to keep them operating. Commanders labored mightily to integrate these soldiers into their units before they became casualties, with mixed results. The dips in combat effectiveness were unavoidable and the cost of the system of individual replacements was high. Between June 1944 and May 1945, the 9th Infantry Division suffered 20,445 battle and 20,091 non-battle casualties, nearly three times the division's authorized strength.¹ Many of these casualties returned to the
division after a stay in the hospital; many did not. The soldiers of the 9th Infantry Division earned their place in the Great Crusade through a great deal of effort and an enormous expenditure of blood.

A closer look at some statistics on combat usage and casualties shows why replacements were so crucial to the success of American infantry divisions in World War II. Between 8 November 1942 and 8 May 1945, the 1st Infantry Division spent 442 days in combat (Figure 58). During the campaigns in North Africa and Sicily, this combat was punctuated by periods of rest and training. Additionally, the division received a long period of rest and training in Great Britain prior to the Normandy invasion. Between D-Day and VE Day, the division spent 317 days in combat with almost no rest. Nearly every month the Big Red One sustained two to three thousand battle and non-battle casualties; in November 1944 the casualty totals exceeded 5,500 men (Figure 59). During the campaign for France and Germany, the 1st Infantry Division sustained 29,630 battle and non-battle casualties, yet it ended the war at nearly full strength. Clearly, once an infantry division of the Army of the United States entered combat in Europe and sustained losses, it could never maintain a high level of combat effectiveness unless it integrated its replacements in a suitable manner.
FIGURE 58
1ST INFANTRY DIVISION, DAYS IN COMBAT

Source: 1st Infantry Division, "Battle Engagements," 18 June 1945, File 301-0.3.0, Box 5664, Record Group 407, National Archives, Modern Military Records Branch.
FIGURE 59
1ST INFANTRY DIVISION LOSSES, D-DAY TO VE DAY

Source: 1st Infantry Division, After-Action Reports, July 1944-May 1945, File 301-1, Box 5672, Record Group 407, National Archives, Modern Military Records Branch.
Most of these replacements, regardless of their initial training, went to infantry regiments. A look at the casualties in a typical infantry division shows why this was so (Figure 60). Of the 22,858 battle casualties suffered by the 9th Infantry Division in World War II, over 96 percent were sustained by the three infantry regiments of the division. Army Ground Forces was not initially prepared to replace losses to infantry regiments on this scale. Until early 1944, the Replacement Training Centers (RTCs) geared the rate at which they produced soldiers with different skills to the needs of mobilization, not losses in combat. Since combat losses overwhelmingly involved combat soldiers, the result of this system was an oversupply of technical specialists and an undersupply of infantrymen. By late 1943 the lack of infantry replacements created a crisis overseas, which the Army Ground Forces temporarily solved by stripping 35,249 men from combat divisions still training in the United States. This action disrupted the divisions in training. The situation got worse before it got better. Between April and September 1944, the War Department stripped 91,747 men from twenty-two combat divisions still in the United States, an average of 4,170 men per division (or nearly two-thirds of the infantry in each division).³

After the pursuit across France ended in the fall of 1944, casualties rose, and the American army groups soon used up the available pool of in-theater replacements.
FIGURE 60
9TH INFANTRY DIVISION CASUALTY BREAKDOWN

Source: 9th Infantry Division, Reports of Operation, File 309-0.3, Box 7329, Record Group 407, National Archives, Modern Military Records Branch.
Eisenhower's staff pleaded with the War Department to increase the rate of infantry replacements. The War Department responded by culling men from the Zone of the Interior in the United States, eliminating the ban on the use of eighteen year old soldiers in combat, and urging the ETO to cull out its communications zone personnel for retraining as infantrymen. The ETO also converted some anti-aircraft artillery units to infantry as the need for anti-aircraft defense dwindled.

The replacement system slowly adjusted to the need to produce more infantrymen (Table 7). As the war progressed the authorized percentage of infantry replacement capacity in RTC's rose from 46 percent in October 1940 to a high of 86.7 percent in January 1945. The figures for replacement

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capacity by the latter date took into account the results of combat experience in Europe, and were a rough indication of how casualties were distributed among the various arms during the war.

Infantry divisions adopted various expedients to integrate replacements more smoothly. As discussed in Chapter VIII, some divisions formed training centers to indoctrinate and train replacements, rehabilitate combat exhaustion cases, and train junior officers and noncommissioned officers before they assumed leadership duties in their units. By treating soldiers arriving in the division fairly and with respect, the division training center went a long way to ensuring that replacements would integrate smoothly into their new units. Not all divisions formed training centers at division level, but most learned to integrate replacements into units while they were in reserve positions and not at the front.

In Eisenhower's Lieutenants, historian Russell Weigley contends that American infantry divisions in World War II were victims of the past history of the United States Army. Torn between the mobility of the frontier army and the power of the large divisions sent to France in World War I, the Army of the United States in World War II formed divisions with too little staying power for the battles of attrition in France and Germany in 1944 and 1945.
Weigley's argument is attractive, but superficial. American infantry divisions in World War II routinely operated with numerous attachments in combat—to include artillery, tank, tank destroyer, and anti-aircraft units—which gave them much greater power than one would surmise from a look at their tables of organization. Additionally, the conversion to the triangular infantry division did not cause the replacement problems overseas in World War II. In his comments on the 1940 Army maneuvers, General McNair stated:

Both square and triangular divisions embody a high degree of strategic and tactical mobility; great fire power; and when employed properly, adequate ability to sustain combat. The triangular division has the advantage of being controlled and maneuvered more easily than the square division. The impression that the triangular division is weak is erroneous. While the triangular division is the smaller, a given man power permits correspondingly more triangular divisions than square divisions. Thus a given front can be held equally strongly by both types with the same total number of men. Fewer square divisions, each occupying a larger front, give the same strength as more triangular divisions, each occupying a smaller front.  

Weigley's argument would only hold true had the Army substituted square for triangular divisions on a one-for-one basis. The extra infantry strength of the square division would then have allowed an internal unit replacement system at the division level.

A smaller number of square divisions in France in 1944, however, would have forced commanders to employ all four infantry regiments on the front line. In a conference held
in June 1945 with representatives from VII, VIII, and XIX Corps and the 30th, 69th, 76th, 78th, 87th, and 102d Infantry Divisions, Colonel Gilbert E. Parker of Army Ground Forces inquired regarding the advisability of adding a fourth infantry regiment to the triangular structure of the infantry division for the purpose of allowing rotation of regiments to rest areas. The VIII Corps G-3 believed the idea was a good one provided the old brigade structure was not also revived. Every other unit responded negatively to the idea. Although they considered the goal of rotating units in combat an admirable one, "they would not take the idea seriously because they were unanimous in the belief that higher commanders would be unable to resist the temptation to use the extra regiment tactically instead of restricting it to its intended role." Given the constraints of the ninety division gamble, the Army of the United States simply lacked enough divisions in 1944 and 1945 to operate a unit replacement system in Europe. Individual replacements were the only other recourse.

In *Fighting Power*, historian Martin Van Creveld severely criticizes the manner in which the Army of the United States integrated its replacements during World War II. Van Creveld's arguments have some merit, but ignore the learning process that occurred at division level as the war progressed. Initially, divisions treated replacements poorly and paid the price. As time went on, however, most
divisions came to realize that they had to treat incoming replacements well and ensure their smooth integration into combat units behind the front. Failure to do so meant an increase in casualties and a drop in combat effectiveness, for once engaged in combat, divisions were only as good as the replacements they received to keep them up to strength. The alternative was to leave units in the line without giving them replacements, as the Wehrmacht did. The Germans only withdrew units from combat when they took so many losses that they required complete rebuilding. One wonders whether this policy was any more humane than that employed by the American army in the ETO.

The experience of senior American commanders was also an important element in the development of combat effectiveness in the Army of the United States. The American army mobilized in a very short period of time and lacked combat experience. Senior American leaders lacked experience in commanding large formations due to the scarcity of resources in the interwar Army. They had learned their profession mostly through intensive study in the Army's professional school system. How they would perform in battle was anybody's guess.

In the event, American commanders performed much better at the tactical level of war than they did at the operational level. This study has shown that at the division level, American commanders learned how to use both
maneuver and firepower both to defeat enemy forces and seize terrain. Above the corps level, however, American commanders often lacked a clear concept of operations. Lieutenant General Mark Clark's failure to allow Major General Lucian Truscott's VI Corps to block the Valmontone Gap during the breakout from the Anzio beachhead in May 1944, Lieutenant General Omar Bradley's failure to close the Falaise Gap in August 1944, and the failure of Lieutenant General Courtney Hodges to find a way around the Huertgen Forest in October 1944 are three examples of the lack of expertise shown by senior American commanders at the operational level during the course of the war.

At the division level, however, American commanders displayed the ability to learn from their experiences and change their tactics and techniques, sometimes even in the midst of combat such as during the bitter fighting in the hedgerows during the Normandy campaign. Without a doubt, one of the strong suits of the Army of the United States in World War II was its ability to improvise solutions to tactical problems on the battlefield. American infantry divisions adapted to combat in a variety of environments and innovated extensively to get their missions accomplished. American commanders learned how to combine the efforts of the various arms and services to defeat the enemy and accomplish their missions. As this study has shown, these efforts to learn and adapt usually took place at division
level. Commanders at regimental level and below had to focus their efforts on the current battle; commanders at corps level and above were too far removed from combat to develop new operating methods. In the Army of the United States in World War II, uniform and widespread changes in tactics, techniques, and procedures either took place at the division level or usually failed to take place at all.

One enormous advantage that American divisions had in combat was their vastly superior fire support, made possible by the advances in fire support coordination during the interwar period. American artillery was the best in the world by the time the Army entered combat overseas. Tooled with new, more powerful, more mobile weapons, and directed through a combination of radio-equipped forward observers and fire direction centers, American artillery had the ability to mass fire on the enemy that impressed both friend and foe alike. Was the Army of the United States too firepower oriented in World War II? Perhaps. This emphasis on firepower, however, took advantage of the strongest arm in the Army and largely negated the superior ability of German units to maneuver at the small unit level.

American commanders eventually learned that they must strike a balance between maneuver and firepower or risk failure in combat. In his groundbreaking study of command and control in World War II, *Men Against Fire*, S.L.A. Marshall contended that American infantrymen often displayed
a lack of ability to maneuver under fire; indeed, that many of them failed to even fire their own weapons at the enemy. The primary problem of American commanders in World War II was to get their men to advance under fire. Good maneuver alone could not solve the problem; American units had to gain fire superiority over their adversaries before they could dominate the battlefield. Many factors contributed to the problem: combat isolation, poor use of weapons, unrealistic training, inadequate communications, and the lack of recognition of small unit cohesion as a necessary component of combat effectiveness.

Until the mid-1980s historians took Marshall's word for the evidence he used to support his argument. Influential works of military history, to include John Keegan's *Face of Battle*, Russell Weigley's *Eisenhower's Lieutenants*, and Max Hastings' *Overlord* quoted Marshall's statistics as historical truth. In the past decade, however, several writers and historians have examined Marshall's evidence and found it wanting. *Men Against Fire* was authoritative because it offered hard statistics in place of anecdotal observations. Without the evidence, does Marshall's argument collapse?

Soldiers rarely saw their enemies on the battlefields of Europe in World War II, especially in places such as the hedgerows of Normandy. Units often needed to direct fire at areas, not individual targets. Artillery, mortar fire, and
automatic weapons (light machine guns and Browning automatic rifles) were better for suppressive fire on area targets; the M-1 rifle was a weapon better suited for point targets. The lack of rifle fire did not adversely affect most battles since artillery and crew-served weapons provided most of the firepower for our Army.

Rarely would an infantryman get a clear shot at an enemy soldier with his rifle. Nevertheless, infantrymen fired their weapons when they had to. Between 8 June 1944 and 8 May 1945, the 90th Infantry Division expended 5,612,455 rounds of M-1 rifle ammunition, or roughly 900 rounds per weapon in the division. Apparently, the soldiers fired their weapons more often than S.L.A. Marshall gave them credit for. American infantrymen in World War II fired their weapons as necessary to accomplish their mission and survive on the battlefield.

The fact is, however, that small arms fire from the M-1 rifle was not the determining factor in whether American units achieved "fire superiority" on the battlefield. Firepower for infantry units came from many sources, most of them external to the infantry battalion itself, and chief among which was the excellent artillery support which American units enjoyed throughout the war. Reflecting on his experience as an infantry battalion commander in World War II, General William E. Depuy concluded that what he really accomplished "was that I moved the forward observers
of the artillery across France and Germany. The artillery massed firepower that the infantry lacked, and although the infantryman was essential to take and hold ground, he was not the primary killing instrument of the American army in the ETO. The percentage of soldiers who fired their rifles in any given engagement is, to a certain extent, irrelevant. The Army of the United States achieved its dominance in firepower over the German army through the skillful use of all of the fire resources at its disposal. The victory belonged to the combined arms team—not any one part of it.

American divisions had other advantages in battle, advantages sometimes overlooked by historians who focus too narrowly on the tactical maneuvers of armor and infantry units in battle. The Allies had an outstanding intelligence system, although noticeable failures in 1944 at Arnhem and in the Ardennes tarnished its reputation somewhat. The information provided by ULTRA shortened the war by months, if not years. A steady stream of enemy prisoners and superior aerial reconnaissance also provided a great deal of information to American commanders at the tactical level. American logistics and transportation assets surpassed those of any other nation. Although certain American weapons, such as tanks and machine guns, were not as effective as their German counterparts, the quantity of weapons provided to American forces by the miracle of wartime industrial
production in the United States provided a certain quality of its own. The American armed forces also proved their ability to operate in a joint environment, although this took longer than it should have in the case of the development of an effective close air support system for ground units. Naval forces enabled Allied forces to launch six major amphibious invasions in North Africa and Europe during the course of the war, while air forces gained air supremacy over the Continent. Looked at in its totality, the combat effectiveness of the Army of the United States in 1944 and 1945 was impressive.

Although this study has analyzed the process used in developing combat effective divisions in the American army during World War II, were American divisions as good as their counterparts in the Wehrmacht? At the end of 1944, Oberkommando des Heeres (High Command of the Army) published a series entitled "Battle Experiences" which outlined the German view of American soldiers, tactics, and weapons. Although the documents are heavily laden with Nazi propaganda and officially maintain the superiority of the German infantryman, the German army recognized the improvement in American soldiers since the Normandy invasion. "Battle Experiences" praises the coordination of American infantry, tanks, and planes. The High Command recognized the vast superiority of American artillery due to its rapid communications, accuracy, volume of fire, greater
range, and its organic aerial observers. Interestingly, the manuscripts rate the American replacement system as being very effective. The Germans also evaluated highly American tactical leadership, which they recognized as being very adaptive and quick to learn from mistakes on the battlefield.  

Despite these admissions, the German High Command believed the American soldier relied too heavily on massive material support, avoided close combat, disliked night fighting, and surrendered too easily. The German High Command also believed that American planning was too cautious and its attack methods too rigid. The official U.S. Army historian of the Lorraine Campaign concludes: "To what extent the above observations are valid and valuable can best be determined by the trained soldier who has made an unbiased and critical study of the operations in Lorraine and in other areas of the Western Front during the autumn and early winter of 1944."  

This study verifies some of the German claims, such as the reliance of American divisions on heavy material support. On the other hand, if an army has an abundance of material, why not use it to overwhelm the enemy and reduce casualties? American planning was also cautious, especially in Normandy until the breakout during Operation COBRA. Even after the pursuit across France, American planning was often methodical at best, as the battle of the Huertgen Forest
shows. As the campaign for France and Germany progressed, however, American tactical commanders learned from their mistakes and adapted their tactics to fit the situation on the battlefield. Contrary to the German High Command's beliefs, the American soldier did not avoid close combat, nor was he a poor night fighter—as the experiences of the 1st, 90th, and 104th Infantry Divisions illustrate. The assertion that the American soldier surrendered too easily is surprising given the massive disparity in the large number of Germans taken prisoner in 1944 compared with the relatively small number of Americans who surrendered.

Although the Army of the United States achieved its objectives in Europe with the unconditional surrender of Germany in May 1945, the question remains whether American infantry divisions succeeded because of quantitative superiority or due to the development of superior combat effectiveness. This study, which has examined the record of American infantry divisions in combat, suggests the combat effectiveness of American divisions may have contributed as much to victory as material abundance.

General Dwight D. Eisenhower belatedly came to the realization that the combat soldier identified with his division more than any other unit of which he was a part. In recommending several divisions for Presidential Unit Citations\(^{18}\) after the war, Eisenhower wrote to General George C. Marshall that "the Army esprit de corps centers
around a division much more than it does any other echelon. Consequently, the citation of particular battalions within a division does not mean as much to the soldier as a commendation to the division itself."19 Eisenhower went on to state:

The 61 divisions and the air forces in this command have won a tremendous victory and even with the recent approval of the citation for the 3d Infantry Division there will be only three of them that have been cited by the War Department. [The 101st Airborne Division and the 4th Armored Division had been cited for their gallant defense and rescue of Bastogne during the Battle of the Bulge.] The others that should first be considered because of fighting well in two theaters, are the 1st, 3d, 9th, 36th and 45th Infantry Divisions; the 82d Airborne Division and the 2d Armored Division. All of them have long and brilliant battle records. In addition to those it would, of course, be difficult to exclude the 2d, 4th and 90th Infantry Divisions, and the 3d Armored as well as the 29th and 30th Divisions. It was because of the difficulty of choosing fairly among those named above that I limited my former recommendations to a single infantry division, namely, the 3d.20

General Marshall replied that the 3d Infantry Division's "performance was so outstanding as to warrant beyond question the Presidential Citation," and he recommended that General Eisenhower carefully screen other divisions for similar awards and forward them to the War Department in a group.21

To assist him in making his decision, Eisenhower asked the European Theater of Operations Chief Historian, Colonel S.L.A. Marshall, to evaluate the combat records of the divisions that fought in the European campaign. The theater
historians grouped the divisions that distinguished themselves into two categories. In the first category were those divisions whose "performance has been consistently strong and meritorious and in particular operations has been outstanding." This group included (in order) the 30th, 1st, and 5th Infantry Divisions. The second category included "those divisions which have given long, arduous and workmanlike service but have either lacked the luster of those named in the first category or at one stage or another have performed somewhat less well..." This group included (in order) the 9th, 29th, 4th, and 45th Infantry Divisions. In addition, the historians recommended the 2d Armored Division for a unit citation, as the 3d and 4th Armored Divisions had already been recommended for awards.

Eisenhower approved many—but not all—of the recommendations. Before he left Europe to return to the United States in November 1945, Eisenhower approved recommendations for unit citations for eight divisions.

His list, in order of priority, read:

1st Infantry Division: Capture of Aachen
2d Armored Division: St. Lo Breakthrough [COBRA]
3d Armored Division: Exploitation of the Remagen Bridgehead and Encirclement of the Ruhr Pocket
5th Infantry Division: Drive from Luxembourg across the Rhine River
30th Infantry Division: Breaching the Siegfried Line during the Aachen Campaign
2d Infantry Division: Defensive Stand at Elsenborn Ridge
90th Infantry Division: Reduction of Metz
29th Infantry Division: Drive from the Siegfried Line to the Roer River
With the acceptance of these recommendations, the War Department would have cited eleven divisions that fought in the ETO: one of four airborne divisions (the 101st Airborne Division), three of thirteen armored divisions (the 2d, 3d, and 4th Armored Divisions), and seven of forty-three infantry divisions (the 1st, 2d, 3d, 5th, 29th, 30th, and 90th Infantry Divisions). In making his recommendations, Eisenhower rejected recommendations for unit citations for numerous divisions, to include the 5th, 6th, 9th, and 10th Armored Divisions and the 4th, 9th, 26th, 36th, 45th, 79th, 80th, and 99th Infantry Divisions. Clearly, American commanders in World War II felt their divisions performed a lot better in combat than some historians have given them credit for.

A recent survey of living graduates of the United States Military Academy who fought in World War II largely confirms what Eisenhower felt in 1945. Asked their opinion on which were the best American infantry divisions (excluding airborne divisions) that served in the European Theater of Operations, the respondents listed (in order) the 1st, 3d, 2d, 4th, 9th, 30th, 29th, 45th, and 104th Infantry Divisions. They mentioned the 90th Infantry Division as the most improved division during the course of the war. The only unit that appears in the survey that Eisenhower did not consider for a citation was Major General Terry de la Mesa Allen's 104th Infantry Division, the Timberwolves. As
discussed previously, Allen's accomplishment in crafting his second division into the premier night-fighting organization in the Army of the United States deserves much praise.

What made these divisions so good? First and foremost, they had good senior leadership and capable staff officers at the division level. Early combat experience provided the 1st, 3d, 9th, and 45th Infantry Divisions with a marked advantage over other divisions that faced their first test of battle on or after D-Day. Similarly, those divisions that fought in Normandy were much more effective than those that arrived in the fall of 1944. Combat experience alone was insufficient to make a unit effective, however. Only after commanders had digested lessons learned through the after-action review process and had initiated programs to train units on their weaknesses did divisions improve. The best divisions developed an early appreciation for the combined arms team—especially effective fire support. Good divisions also placed a great deal of emphasis on instilling in their soldiers organizational pride and a belief in unit heritage. None of these divisions could have functioned effectively over an extended period of time, however, without the ability to take losses and continue on with their missions. All good divisions developed effective replacement integration systems.

The great achievement of the Army of the United States in World War II was to mold a large army of citizen soldiers
into an effective fighting machine in a short period of
time. The process did not work smoothly and the end result
was not perhaps what Army leaders had intended when they
began the mobilization process in 1940. Nevertheless,
American divisions, led by a small slice of Regular Army and
National Guard cadre and filled with draftees and the
products of officer candidate schools, with few exceptions
performed competently on the battlefield once they overcame
the initial shock of combat. The first battles fought by
American infantry divisions were for the most part traumatic
affairs, but the citizen-soldiers of these units showed
their ability to learn from their mistakes and improve their
performance in future battles.

Logistical superiority was not the only reason for the
victories of the Army of the United States in ground combat
in World War II. With only forty-two infantry
divisions, sixteen armored divisions, and three airborne
divisions in the ETO, American commanders had to ensure that
the combat effectiveness of their units matched or exceeded
that of their enemies. A survey of officers who fought
against the Wehrmacht in World War II indicates that the
American army may have reached a crossover point in terms of
quality during the fall of 1944. The key to this
development was the transformation of the standard American
infantry division from untested organization to a fighting
unit capable of closing with and destroying the enemy in a
variety of combat environments. The forty-two infantry divisions of the Army of the United States in the European Theater of Operations became the building blocks with which Allied commanders created the foundation for the successful campaigns in western Europe in 1944-45.
ENDNOTES

1. Based on casualty statistics in 9th Infantry Division reports of operation, June 1944 to May 1945, File 309-0.3, Box 7326, Record Group 407, National Archives, MMRB.

2. GNGCS 320.2, 7 February 1944, Subject: Replacement Situation, Record Group 337, National Archives.


5. Ibid., 22-28.

6. General Headquarters, "Comments on Army Maneuvers, 1940," 7 January 1941, p. 2, File 330-0.3.0, Box 8724, Record Group 407, National Archives, MMRB.


9. For a good examination of the American army's ability to improvise tactics and techniques in World War II, see Michael D. Doubler, Closing With the Enemy: GIs at War in Europe, 1944-1945 (Lawrence: University Press of Kansas, 1994).


12. See Appendix B.

13. HQ, 90th Infantry Division, "After Action Report, May 1945," IV-6, File 390-0.3, Box 13282, Record Group 407, National Archives, MMRB.


16. Ibid., 590-91.

17. Ibid., 592.

18. Under War Department Circular 333, Section IV, 22 December 1943, the following criteria had to be met for the award of a Distinguished Unit Citation: "To justify citation, it must be clearly established that the unit distinguished itself in battle by extraordinary heroism, exhibited such gallantry, determination, and esprit de corps in overcoming unusually difficult and hazardous conditions as to set it apart and above units participating in the same engagement. As a unit, it must have distinguished itself by conspicuous battle action of a character that would merit the award to an individual of the Distinguished Service Cross [the Army's second highest award for valor]."


20. Ibid.

21. Ibid.

22. HQ, U.S. Forces, European Theater, "Distinguished Unit Citations for Divisions," 3 August 1946, Tab B, Awards of Unit Citations, Box 4, Record Group 332, National Archives, MMRB.

23. Ibid.

24. Ibid., Tab F.

25. See Appendix A.

26. See Appendix A.


28. See Appendix A.
APPENDIX A

WORLD WAR II COMBAT EFFECTIVENESS SURVEY

In an effort to explore the feelings of those officers who served with the Army of the United States in Europe during World War II, I conducted a survey of veterans of the conflict. Most of those surveyed were graduates of the United States Military Academy from the classes of 1916 through 1944. Many of these officers served in key mid-grade officer positions during the war and were able to view first-hand the strengths and weaknesses of American infantry divisions in combat. Although I skewed this sample towards officers from a single commissioning source, the graduates of West Point served in every division that fought in Europe in World War II. Their attitudes towards the combat effectiveness of American infantry divisions are a valuable and nearly untapped resource.

I received 231 responses to the survey. Considering the advanced age of most of the officers surveyed, their recollections and feelings seemed remarkable fresh and thoughtful. Although not every respondent answered every question, the survey as a whole represents an attempt to explore, from the point of view of the surviving
participants, some of the issues involving the combat effectiveness of American infantry divisions in Europe during World War II.

Many respondents wrote lengthy and thoughtful comments on their questionnaires. Unfortunately, I cannot list all of those comments here. Where appropriate, I have integrated comments into the body of this work. I have reproduced the survey and the statistical compilation of responses below.

WORLD WAR II COMBAT EFFECTIVENESS QUESTIONNAIRE

[Please respond to as many questions as possible. Even a partial response will help. Your responses can be as short or long as you like. If you need more space, feel free to write on the back or on a separate sheet of paper.]

1. What division(s)/corps did you serve in during WWII?
Survey participants served in nearly every division and corps that operated in Europe in World War II. A few participants served in the United States in the training establishment of Army Ground Forces.

2. What duty position(s) did you serve in during WWII?
[please indicate the rank you held next to each duty position]
Survey participants held a variety of positions, to include platoon leader, company commander, battalion commander, regimental commander, commanders of attached or supporting units such as tank destroyer and field artillery battalions,
commanders of replacement training centers, and a variety of staff positions at all levels (battalion, regiment, division, corps, army, army group, and Supreme Headquarters).

3. In your opinion, how did the combat effectiveness of American infantry divisions compare to German infantry divisions in:

<table>
<thead>
<tr>
<th>Region</th>
<th>Sicily/Italy?</th>
<th>Normandy?</th>
</tr>
</thead>
<tbody>
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<td>Worse: 4</td>
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<tr>
<td></td>
<td>Equal: 5</td>
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<td></td>
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<td></td>
<td>Equal: 27</td>
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<tr>
<td></td>
<td>Superior: 26</td>
<td></td>
</tr>
<tr>
<td>Normandy?</td>
<td>Worse: 4</td>
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</tbody>
</table>

Late 1944?

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<tbody>
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</tr>
<tr>
<td></td>
<td>Equal: 30</td>
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<tr>
<td></td>
<td>Superior: 93</td>
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</tr>
<tr>
<td>Sicily/Italy?</td>
<td>Worse: 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Equal: 2</td>
<td></td>
</tr>
<tr>
<td>North Africa?</td>
<td>Superior or Much Superior: 122</td>
<td></td>
</tr>
</tbody>
</table>

Late 1944?

On the whole, the respondents hold a great deal of respect for the German soldier. They also stressed that there were sometimes wide discrepancies in the capabilities of various units in both armies at any given stage of the war. Even accounting for the wide variety of experiences of the survey respondents, however, the perception is evident among the officers of increasing American combat effectiveness against the German army over the course of the war. The question for the historian is whether this increased relative effectiveness was caused by the improvement of the American army or by the deterioration of the German army.
4. In your opinion, which were the best American infantry divisions that served in the European Theater of Operations (ETO)? [list up to five; please do not list airborne divisions]

1st: 99  29th: 17
2d: 49  30th: 19
3d: 70  45th: 17  [Note: All other divisions
4th: 49  104th: 15  received fewer than fifteen
9th: 39  responses.]

Most of the officers who were in a position to judge the comparative effectiveness of different divisions have passed away. The purpose of this question was not to rank order divisions, but to identify those divisions which combat veterans perceived to be effective in combat. In addition to the data above, I looked at what senior leaders of the Army at the time had to say about different divisions in their correspondence or memoirs. Since this question dealt with the ETO, units such as the 10th Mountain Division and 88th Infantry Division (which fought exclusively in Italy) are not included in the survey.

5. What made these units so good? (Please comment on as many areas as possible: pre-deployment training, combat experience, leadership, morale, ability to inculcate lessons learned, quality of personnel, etc.)

The usual answer to this question was "all of the above." Of those factors listed, however, senior leadership ranked
at the very top in most cases where the respondent expressed an opinion. One officer wrote, "The units were as good as their commanders." Another stated, "...good experienced leadership is the most important ingredient for a combat unit, whether it be a squad or a division." Early combat experience provided the 1st, 3d, 9th, and 45th Infantry Divisions with a marked advantage over other divisions that faced their first test of battle on or after D-Day. Other factors mentioned included discipline, a good replacement integration system, an appreciation for the combined arms team—especially effective artillery fire support, the ability to make timely tactical decisions, special training (e.g., amphibious training), pride in unit heritage, and the ability to take losses without losing spirit. Regarding quality of personnel, respondents considered the number of regular army cadre (especially at the noncommissioned officer level) in a unit and combat experience as important factors.

6. In your opinion, which American infantry divisions had the most difficulty adjusting to combat? [list up to five]
   28th: 15  
   90th: 16  
   106th: 34

[Note: All other divisions received fewer than fifteen responses.]

7. Why?
The response varied from unit to unit. Respondents rated the senior leadership in the 90th Infantry Division as very
poor during most of the Normandy campaign. The 28th Infantry Division seemed to be a "snake-bit" outfit that fought three bloody battles (Huertgen Forest, Battle of the Bulge, and the Colmar Pocket) in succession without ever fully recovering. The 106th Infantry Division entered the front lines for the first time in the Ardennes Forest on 10 December 1944 and found itself in the middle of the axis of advance for the German Sixth SS Panzer Army six days later. The enemy overwhelmed the division before it had an opportunity to adjust to combat.

8. Did any of the divisions you listed in question six above dramatically improve during the war? If so, why?

Thirteen respondents cited the 90th Infantry Division as "vastly improved" over the course of the war from its rough start in Normandy due to changes in senior leadership. Most respondents recognized that all units improved after suffering through their first shock of combat.

9. Were there any qualitative differences between regular, reserve, National Guard, and draftee divisions? If so, why?

Yes: 86
No: 31

Respondents listed the quality of commanders, experienced junior (especially noncommissioned officer) leadership, lengthy pre-war training, and early combat experience as key factors in making regular divisions more effective in combat, especially early in the war. National Guard
divisions began the war with personnel drawn from the same geographical area, but respondents viewed this factor differently. Some felt the National Guard system made these divisions more cohesive, others felt the middle and senior-grade leadership in these divisions was poor due to the workings of the "good old boy" network and politically appointed commanders. Those that said there were no differences believed the process of pulling cadres from older divisions to form new divisions, the infusion of draftees into all units, and the standardized training process levelled the Army quickly.

10. If your answer to question nine was "yes," did these differences disappear by the end of the war?

Yes: 57
Partly: 23
No: 6

Respondents stated that most divisions, especially the National Guard divisions, benefitted from an infusion of more experienced Regular Army leadership (given the make-up of the survey population this is an understandable conclusion). Combat experience made most divisions more effective relatively quickly. Additionally, after taking large casualties, divisions ended up receiving large numbers of replacements that made units more equal in effectiveness, especially below battalion level. By the end of the war, most officers believed one could not distinguish different
divisions by type. The answers to this question also show the perception among the officers that American divisions improved during the course of the war when compared to each other, and not just relative to the deteriorating German army. One officer stated, "...all U.S. units became more and more professional as they gained experience and found competent leaders." Another stated, "By the end of the war, we had essentially a 'Citizen Army' in all respects."

11. In his book *Men Against Fire*, historian S.L.A. Marshall contends that American riflemen had difficulty engaging the enemy in combat; indeed, that fewer than 25 percent of them fired their weapons at the enemy in any given battle, even when offered the opportunity to do so. Despite the fact that Marshall's evidence has been attacked in recent years, do you agree with Marshall's contention? If so, what caused this problem? If not, why not?

Agree: 36
Partly Agree: 24
Disagree: 84

I have addressed this issue more fully in Appendix B.

12. Please use the space below and on back to discuss the most important problem(s) you faced in improving the combat effectiveness of your unit(s).

Comments fall into several categories, with the number of officers responding in parentheses.
Personnel:
- Integrating individual replacements into the unit (25)
- Selection of good junior officers and noncommissioned officers; inability to determine which leaders would perform under fire (14)
- Lack of qualified officer/noncommissioned officer replacements (7)
- War Department stripping of trained men in the U.S. to replace combat losses in Europe (6)
- Inexperienced cadres/being constantly stripped to provide cadres (5)
- Poorly trained infantry replacements (4)
- Poor quality of soldiers (2)

Training:
- Lack of realistic training opportunities for small units, both before deployment overseas and during lulls in combat (14)
- Developing teamwork and unit cohesiveness (7)
- Maintenance of unit esprit/morale/discipline (7)
- Inability to replicate combat conditions in training (6)
- Teaching soldiers how to live in difficult field conditions, even when not under fire—especially in cold weather (5)
- Poor infantry-tank coordination (4)
- Instilling initiative in junior officers and noncommissioned officers/getting small units to move under
• Poor training facilities, especially early in war (2)
• Lack of live-fire training (2)
• Maintaining physical fitness in units (2)
• Lack of training aids/material (1)
• Committee system of training in Replacement Training Centers (1)

Supply:
• Poor equipment (towed anti-tank guns, tanks, machine guns, radios) (5)
• Receiving different type equipment after the unit's training cycle was already complete and just prior to deployment (3)
• Lack of supplies/supply discipline (3)

Communications:
• Communications up and down the chain-of-command; understanding the intent of orders (7)
• Poor radios (3)
APPENDIX B

MEN AGAINST FIRE: DID THE SOLDIERS SHOOT?

Men Against Fire, S.L.A. Marshall's 1947 study of the behavior of American infantrymen in combat in World War II, shattered many commonly held beliefs about the motivations and actions of soldiers on the field of battle. Marshall contended that fewer than 25 percent of infantrymen fired their weapons in any given battle; therefore, a special few carried the combat burden for the majority of units. He also stated that men in combat are motivated out of fear of letting their comrades down in battle, rather than by abstract notions of patriotism or freedom. The primary problem of American commanders in World War II was to get their men to advance under fire (thus the title of the book). Good maneuver alone could not solve the problem; American units had to gain fire superiority over their adversaries before they could dominate the battlefield. Many factors contributed to the problem of men against fire: combat isolation, poor use of weapons in combat, unrealistic training, inadequate communications, and the lack of recognition of small unit cohesion as a necessary component of combat effectiveness.
Marshall believed that fewer than 25 percent of riflemen fired their weapons in any given battle, even though the situation would have allowed at least 80 percent to do so. Members of crew served weapons did not have the same problem. They routinely fired their weapons, as did soldiers who were armed with automatic weapons. The ratio of firers to non-firers did not change with terrain, the tactical situation, the nature of the enemy, or amount of combat experience. A few men (the "killers") did most of the firing for the unit in combat. Marshall stated that routine marksmanship training did not do enough to instil in soldiers the need to use their weapons against the enemy in combat.

Marshall believed that many American commanders did not understand the use of fire in battle. Maneuver alone is not sufficient to achieve victory. "The essence of success in tactics comes of what you do with fire after you get there. In his realistic restatement of Forrest's principle, Major General Charles W. O'Daniel put it this way: 'In battle, it is a matter of getting there first, regardless, and then having the ability to stay put'." To Marshall, the modern battlefield necessitated the movement of fire to overwhelm the enemy in combat. If American riflemen would not fire their weapons in combat, American infantry units could not establish fire superiority over their enemy. Part of the problem, Marshall believed, stemmed from American culture,
which taught American soldiers to believe that aggression and killing are bad.\textsuperscript{7}

Why, then, did American soldiers fight? Marshall believed that men remained in combat due to the presence of their comrades. Soldiers do not want to appear as cowards to their peers.\textsuperscript{8} Patriotism and moral ideas cannot sustain the soldier in combat. Small unit cohesion is therefore key to combat effectiveness. "In battle," Marshall states, "you may draw a small circle around a soldier, including within it only those persons and objects which he sees or which he believes will influence his immediate fortunes. These primarily will determine whether he rallies or fails, advances or falls back."\textsuperscript{9}

Marshall's emphasis on small unit cohesion as the key to battle was an important part of his work. His goal was to change the individual replacement system which he felt worked so poorly in the Army of the United States in World War II. Personnel managers had not taken small unit cohesion into account when designing replacement policies:

While giving lip service to the humanitarian values and while making occasional spectacular and extravagant gestures of sentimentality, those whose task it was to shape personnel policy have tended to deal with man power as if it were motor lubricants or sacks of potatoes...They have moved men around as if they were pegs and nothing counted but a specialist classification number. They have become fillers-of-holes rather than architects of the human spirit.\textsuperscript{10}

Through his writings, Marshall aimed to force the Army to recognize the value of the human spirit on the modern
battlefield.

Marshall wanted his readers to know that men, not machines, ensured Allied victory in World War II. Though Americans believe that war is best fought with machines in order to conserve the lives of its soldiers, there are limits to the ability of technology to replace soldiers in combat. The industrial productivity of the United States made Allied victory possible, but did not ensure it:

...the great victories of the United States have pivoted on the acts of courage and intelligence of a very few individuals... Victory is never achieved prior to that point; it can be won only after the battle has been delivered into the hands of men who move in imminent danger of death. I think that we in the United States need to consider well that point, for we have made a habit of believing that national security lies at the end of a production line.11

Unfortunately, future generations of Army officers and historians would latch onto Marshall's contention that most American riflemen did not fire their weapons in combat as the most important part of his book. As the Army worked to increase the "fire ratio" and historians cited Marshall's "evidence" of the lack of aggressiveness of American infantry in combat, other tenets of Marshall's work—small unit cohesion and the importance of the soldier on the battlefield—were minimized or forgotten.

Until the mid-1980s historians took Marshall's word for his statistics. Influential works of military history, to include John Keegan's Face of Battle, Russell Weigley's Eisenhower's Lieutenants, and Max Hastings' Overlord quoted
Marshall's statistics as historical truth. In the past decade, however, several writers and historians have examined Marshall's evidence and found it wanting. The first assault came from Harold P. Leinbaugh and John D. Campbell, who co-authored *The Men of Company K.* Leinbaugh and Campbell examined the experience of their infantry company in World War II, part of the 333d Infantry Regiment, 84th Infantry Division, and discovered no basis for Marshall's claims. Furthermore, they believed that their experience was not significantly different from that of the other 1200 or so rifle companies that fought in Europe. Leinbaugh checked into Marshall's other writings and found more inconsistencies, to include the fact that Marshall lied about his own experience in the 90th Division during World War I. Was it possible that Marshall had also fabricated his statistics?

Marshall claimed that the data he used to write *Men Against Fire* came from over 400 company level after-action interviews, a technique which he pioneered while assigned as a theater historian in the Pacific in 1943. Yet when Roger J. Spiller, Deputy Director of the Combat Studies Institute at the U.S. Army Command and General Staff College at Fort Leavenworth, sought out Marshall's evidence, he found none. John Westover, Marshall's assistant in Europe, does not recall Marshall ever asking about "fire ratios" in his interviews or discussing the issue in conversation.
Marshall's own surviving papers and notebooks bear no evidence that he was collecting statistics. Spiller concludes, "The 'systematic collection of data' that made Marshall's ratio of fire so authoritative appears to have been an invention."\textsuperscript{16}

The records of the Theater Historian, European Theater of Operations, located in the Modern Military Records Branch of the National Archives, bear no traces of Marshall's quest for firing ratio statistics in Europe. Nor can one locate any material on the subject in the S.L.A. Marshall Military History Collection located at the University of Texas at El Paso. This lack of data is not surprising when one considers that infantry companies in Europe spent most of their time either in the line or preparing to return to the line. Combat in Europe did not facilitate the lengthy group interview methods that Marshall had used so effectively on Makin Island in the Pacific.\textsuperscript{17} Even if Marshall had interviewed one company every day from D-Day to VE Day (which, given his other duties as deputy theater historian, is a doubtful proposition), he would only have reached 330 to 340 companies. No other theater historian has written or spoken of helping Marshall with his quest for statistics. Sadly, one must agree with the conclusion of one of Marshall's critics: "It is strange that a reputation he [Marshall] would come to deserve was founded on his most irresponsible work."\textsuperscript{18}
Men Against Fire was authoritative because it offered hard statistics in place of anecdotal observations. Marshall's critics have attacked his evidence, but what about the argument? Even if Marshall fabricated his statistics, he must have had some intuitive basis for his observations. Marshall's training was as a reporter, not as a historian. Marshall the reporter might have sensed something about infantry combat in Europe that he could not prove empirically. The question the historian must try to answer, then, is whether Marshall's intuition was correct.

In the World War II Combat Effectiveness Questionnaire, I asked surviving officers who served in Europe between 1942 and 1945 the following question: "In his book Men Against Fire, historian S.L.A. Marshall contends that American riflemen had difficulty engaging the enemy in combat; indeed, that fewer than 25 percent of them fired their weapons at the enemy in any given battle, even when offered the opportunity to do so. Despite the fact that Marshall's evidence has been attacked in recent years, do you agree with Marshall's contention? If so, what caused this problem? If not, why not?" Of 242 officers who returned the survey, 144 expressed an opinion as follows:

Agree: 36
Partly Agree: 24
Disagree: 84
Apparently, S.L.A. Marshall's intuitive observation is shared by a sizeable minority of officers who fought in Europe in World War II. Yet when one analyzes the written responses, many similarities emerge among both those who agree and those who disagree with Marshall's ratio-of-fire statistics.

Respondents who agreed or partially agreed pointed out many factors, but the most frequent was that troops often had nothing to shoot at. Army Ground Forces trained American troops to fire at point, not area, targets. Soldiers rarely saw their enemies on the battlefields of Europe in World War II, especially in places such as the hedgerows of Normandy. Units often needed to direct fire at areas, not individual targets. Artillery, mortar fire, and automatic weapons (light machine guns and Browning automatic rifles) were better for suppressive fire on area targets; the M-1 rifle was a weapon better suited for point targets. Some soldiers feared that firing their weapons would expose their positions and draw enemy return fire. They preferred to let the artillery do the work—and American infantry units usually enjoyed excellent artillery support. Some respondents stated that after heavy casualties in a unit, leaders would rely on the few remaining experienced soldiers to do most of the fighting. Only a few officers believed that the moral beliefs of American soldiers made them reluctant to kill enemy soldiers.
Some officers stated that although they agreed with Marshall, the lack of rifle fire did not adversely affect most battles since artillery and crew-served weapons provided most of the firepower for our Army. One former rifle company commander wrote:

Generally, infantry fighting in Europe did not consist of companies of infantrymen getting up and advancing in a line firing rifles as you moved across open terrain. It usually consisted of small groups making a penetration under fire and the rest exploiting those gains. While you might have supporting fire from others as some advanced it was not a situation where everyone was firing at the same time. In addition we generally had a platoon of tanks or TDs attached to the attacking rifle companies. The supporting fire from these tanks as a group advanced was much more awesome than a number of riflemen firing. Even if 2/3 of the soldiers at any one time did not fire their weapons their mere presence created fear in the enemy. Also when it came to a counterattack the added firepower helped. I think there is a misconception of infantry fighting as being one continuous rain of bullets. It was more spurts and small group penetrations and others taking advantage of a small breakthrough to overrun a position.20

Combat in Europe, in other words, was not the uniform laboratory environment that would make Marshall's statistics meaningful, even if they were true.

Some respondents believed that soldiers had trouble only in their first few firefights. After gaining experience and learning that the rule of the battlefield was "kill or be killed," soldiers had no difficulty firing their weapons at anything that moved:

As a rule, American infantrymen were eminently practical so, when it came down to 'him or me,' there was no question about his choice. Once he
understood 'me' meant firing his rifle, he would...especially if led properly.21

Indeed, the common sense of the American infantryman emerges in many of the respondents comments. In his fight for survival, the rifleman was nothing if not practical.

Those respondents who disagreed with Marshall's fire ratio believed that training and leadership were the keys to ensuring that riflemen engaged the enemy on the battlefield. They believed their units fired when they had to. Many of these respondents also stated that riflemen rarely had an opportunity to engage in a firefight with a visible enemy. They also pointed out that if riflemen were not firing their weapons, why was so much small arms ammunition being used up in the war? Ammunition resupply was a constant concern for infantry units. If the soldiers were not shooting at the enemy, why were they firing their weapons?

The time has come to put the fire ratio controversy to rest. American infantrymen in World War II fired their weapons as necessary to accomplish their mission and survive on the battlefield. The fact is, however, that small arms fire from the M-1 rifle was not the determining factor in whether American units achieved "fire superiority" on the battlefield. Firepower for infantry units came from many sources, most of them external to the infantry battalion itself, and chief among which was the excellent artillery support which American units enjoyed throughout the war. The percentage of soldiers who fired their rifles in any
given engagement is, to a certain extent, irrelevant. The Army of the United States achieved its dominance in firepower over the German army through the skillful use of all of the fire resources at its disposal. The victory belonged to the combined arms team—not any one part of it.
ENDNOTES


2. Ibid., 54.

3. Ibid., 57.

4. Ibid.

5. Ibid., 60.

6. Ibid., 68.

7. Ibid., 78.

8. Ibid., 149.

9. Ibid., 154.

10. Ibid., 155-56.

11. Ibid., 208-9.


15. Ibid., 42.


20. Karl E. Wolf, USMA Class of 1943, rifle platoon leader, rifle company XO, and rifle company commander, 3d Battalion, 16th Infantry Regiment, 1st Infantry Division. Wolf served in combat from D-Day to VE Day.

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