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Operational Performance of the U.S. 28th Infantry Division, September to December 1944

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This study analyzes the operational performance of the 28th Infantry Division during a period of high intensity combat in the European Theater of Operations . The focus is on the difficulties the division experienced within its subordinate infantry units. Infantrymen, though comprising less than 40 percent of the division's total strength, absorbed almost 90 percent of all casualties. The high casualty rate within infantry units severely curtailed the operational performance of divisions in the U.S. Army force structure. This inadequacy forced divisions to remain in combat for excessive durations, greatly increasing battle and nonbattle casualties. The army's personnel system further contributed to the problems infantry divisions experienced within their infantry units. It failed to provide sufficient number of infantry replacements in a timely manner and there was widespread dissatisfaction with the quality of infantry replacements. This study shows that the U.S. Army failed to realize both the importance of infantry units to the war effort and the severity of combat on the modern battlefield. The result was an infantry force structure poorly designed to accomplish its wartime mission.

Replacements, Personnel, Morale, Nonbattle Casualties 173

OPERATIONAL PERFORMANCE OF THE U.S. 28TH INFANTRY DIVISION SEPTEMBER TO DECEMBER 1944

A thesis presented to the Faculty of the U.S. Army Command and General Staff College in partial fulfillment of the requirements for the degree

MASTER OF MILITARY ART AND SCIENCE

by

JEFFREY P. HOLT, MAJ, USA
B.S., University of South Alabama, 1982

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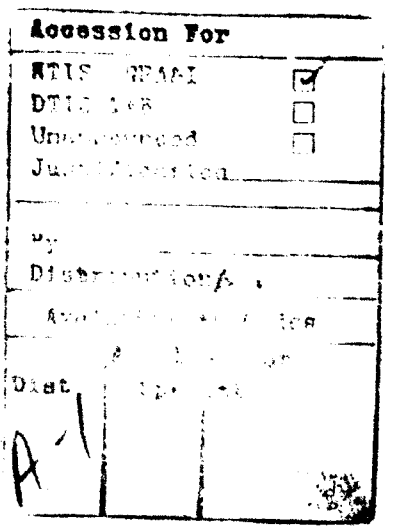

ABSTRACT

OPERATIONAL PERFORMANCE OF THE U.S. 28TH INFANTRY DIVISION, SEPTEMBER TO DECEMBER 1944. by Major Jeffrey P. Holt, USA, 173 pages.

This study analyzes the operational performance of the 28th Infantry Division during a period of high intensity combat in the European Theater of Operations. The focus is on the difficulties the division experienced within its subordinate infantry units. Infantrymen, though comprising less than 40 percent of the division's total strength, absorbed almost 90 percent of all casualties. The high casualty rate within infantry units severely curtailed the operational performance of the division. The difficulties the 28th experienced were commonplace in the European theater. Compounding the problem was the inadequate number of divisions in the U.S. Army force structure. This inadequacy forced divisions to remain in combat for excessive durations, greatly increasing battle and nonbattle casualties. The army's personnel system further contributed to the problems infantry divisions experienced within their infantry units. It failed to provide sufficient numbers of infantry replacements in a timely manner and there was widespread dissatisfaction with the quality of infantry replacements. This study shows that the U.S. Army failed to realize both the importance of infantry units to the war effort and the severity of combat on the modern battlefield. The result was an infantry force structure poorly designed to accomplish its wartime mission.

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CHAPTER 1

INTRODUCTION

> If you take a flat map and move wooden blocks upon it strategically, the thing looks well, the blocks behave as they should. The science of war is moving live men like blocks. And getting the blocks into place at a fixed moment. But it takes time to mold your men into blocks and flat maps turn into country where creeks and gullies hamper your wooden squares. They stick to the brush, they are tired and rest, they straggle after rip blackberries, and you cannot lift them up in your hand and move them. A string of blocks curling smoothly around the left of another string of blocks and crunching it up. It is all so clear in the mind, but the orders are slow, the men in the blocks are slow to move, when they start they take too long on the way. The general loses his starts and the block-men die in unstrategic defiance of matrial law, because still used to just being men, not block parts.[1]

This thesis will examine the performance of infantry units assigned to the U.S. 28th Infantry Division from September to December 1944. During this four-month period of combat, the 28th Infantry Division endured some of the toughest fighting of the Second World War. It fought three major offensive and defensive battles against a skilled and determined enemy, at a cost of almost 20,000 casualties. The division's soldiers also suffered heavily from the debilitating effects of the extremely harsh winter of 1944-45.

The focus of this thesis will concentrate on the rise and fall of infantry unit performance during this period and will consider two major influences. Those influences include manning the force and sustaining the health and morale of combat infantrymen. This thesis will also attempt to analyze how much control the 28th Division exercised over

these factors. It will also analyze possible steps the division might have taken to maintain a consistent level of infantry performance.

Before proceeding further, it is important to answer three key questions for the reader. These questions are critical to understanding the scope and relevance of this thesis. First, why is the thesis restricted to the performance of the division's infantry units? Secondly, why was the 28th Infantry Division selected for study? Lastly, out of all the factors that contribute to unit performance, why were only the factors of manning and sustaining the health and morale of the force selected for study?

The answer to the first question is based on the organization and employment of the infantry division during the World War II. This division had an assigned strength of less than 15,000 men. Out of this strength, the division had two primary sources of combat power, its infantry and artillery units. The division normally had other combat elements attached to it, such as tank and tank destroyer units, but these units changed frequently based on the mission of the division. They were also outside the division's day-today responsibility for manning.

Of the two primary sources of combat power, the infantry element experienced the most significant variations in performance. The division's 112th Infantry Regiment provides an excellent example of how greatly unit performance could vary. During the arduous Huertgen Forest Campaign in November 1944, German defenses, battle fatigue and trenchfoot wreaked havoc on the regiment. Two of its three battalions fled from the battlefield in a complete state of panic. One month later, the 112th won the Presidential Unit Citation for its heroic defensive stand during the Battle of the Bulge.

In contrast, the division's artillery element maintained a consistently high level of performance. As the war went on, artillery in the 28th got stronger and stronger. American artillery was a tremendous success story during the war. The performance of this combat arm drew praise from both Allied and German participants. Surveys of American soldiers also rated the performance of artillery units as very high level.

Thus, if an infantry division was to fail in combat because of unit performance, it was most likely due to the failure of its infantry units. Coming to grips with the possible reasons for failure in these units is a complicated and uncertain business. Certainly any discussion of unit performance must normally address such factors as leadership, tactics, and training. When analyzing operations in the European Theater of Operations (ETO) however, there was one factor that was consistently present. That factor was the almost routine destruction of the infantry companies and battalions of infantry divisions. The personnel of these units comprised less than 40 percent of the division strength, yet they suffered 80 percent of all casualties. Replacements flowed in to fill these shattered units and the destruction continued once more. This environment produced incredible leadership and organizational challenge to maintain even the most basic level of unit proficiency.

In contrast, artillery and other divisional units comprised a very low percentage of the total casualties. These units were much less likely to suffer the dramatic losses in unit cohesion and effectiveness that result from heavy casualties. Their position on the battlefield also provided them with a measure of security and access to shelter denied the frontline infantryman. Personnel in these units were therefore less prone to suffer from the

effects of combat that produced such illnesses as battle fatigue[2] combat exhaustion and trenchfoot. Taken as a whole, it is easy to understand why the performance of infantrymen was so inconsistent and why it is important to study the conditions that might contribute to his failure.

The second question asks why the 28th Infantry Division was selected for study. There were after all, 47 infantry divisions to chose from in the ETO alone. The 28th is the focus of this thesis because it serves as an excellent representative for the majority of the American infantry force that fought in the ETO. This is not to say that the 28th shared a common level of unit performance with all other infantry divisions. Some divisions enjoyed a much greater reputation for success in combat, while others experienced much greater difficulties. The 28th was a solid and reliable unit, a reputation that the division shared with many other units in the theater. The experiences of the 28th with regards to manning and sustaining the infantry force were common to almost all infantry divisions in the ETO.

The 28th was somewhat unique in that it was a national guard division and that it started training for combat almost a year prior to the start of the war. On the surface, the reader could assume that the 28th was very different from the regular army and draftee divisions assigned to the ETO. It was different in the composition of its personnel and because of the advantages gained through a training period that lasted more than three years. The second chapter of this thesis will show that these two assumptions were far from correct. The personnel policies of the U.S. Army were such that, by 1944 the 28th bore only a passing resemblance to the accepted model of a national guard division. The

personnel turbulence from these same policies also meant that the 28th did not receive a measurable advantage in training from its early activation.

The final question concerns the decision to narrow the analysis of infantry unit performance: to two factors: manning the force and sustaining the health and morale of soldiers. There are obviously other factors that might have a tremendous influence on unit performance; leadership, doctrine, and technology are only a few examples. It is also understood that these factors are interrelated, and no single factor should be analyzed in a vacuum. However, it is beyond the scope of this thesis to examine all of the factors that influenced unit performance. Many elements, such as leadership, already fill volumes of historical works. Instead, this thesis will examine the influence of two of the most consistent problem areas that confronted American infantry divisions during World War II. The experiences of the 28th will demonstrate the actual influence of these factors on a unit in combat.

During the World War II, the broad mission of the army's personnel system was to provide personnel to form and organize new units and then to provide individual replacements to maintain combat units at their authorized strength. Given that the strength of the army eventually grew to more than 8,000,000 soldiers and airmen, this was a herculean task. The personnel system also confronted a new form of war. This war required specialized soldier skills that were unimaginable at the end of the World War I. In keeping with the demands of these specialized skills, requirements developed for the identification and distribution of high quality personnel to critical skill areas. Competition

among the army, navy, and marine corps for quality personnel greatly exacerbated the difficulties for the personnel system.

There were bound to be losers in such a competitive system. In the army, those losers were the ground combat units. From both a qualitative and a quantitative standpoint, the ground forces suffered from the army's personnel assignment policies. It was not until the army began serious fighting in Italy in 1943-44 that problems began to appear. Senior leaders recognized that the assignment of poor quality soldiers diluted the fighting power infantry units. They also determined that there were serious flaws in the army's ability to meet the huge and unexpected requirement for infantry replacements. The army made an enormous effort to reform the personnel system and to improve the quality of personnel assigned as infantrymen. Unfortunately most of the changes came too late in the war to help units like the 28th.[3]

Personnel policies also influenced the training and cohesion of units. Near constant personnel turbulence prior to overseas deployment, made it very difficult for units to achieve a high level of proficiency. In combat, training problems centered on the poor skill level of individual replacements. Leaders criticized not only the quality that resulted from the hasty conversion of non-infantry personnel to combat riflemen, but also that of trained infantry replacements as well. As a result, most units had to concentrate precious training time on individual soldier skills. More complex unit skills were hard to develop and almost impossible to sustain in this environment. This created a vicious cycle that led to excessive casualties and poor unit performance.[4]

The health and morale of soldiers were also bound to suffer in such a turbulent system. From the day a soldier entered the replacement pipeline his health and morale tended to deteriorate. The system often separated him from his peer group established in training and expected him to go to war as a individual component in a huge machine. From the time he completed training to the time he arrived at his unit might be as long as three to five months. During that period there was little in the form of training or physical conditioning to maintain his skills and confidence. His journey through the replacement system also exposed him to overcrowded facilities that often lacked such necessities as safe drinkin$_{g}$ water.[5]

When he finally joined his unit, the threats to heal and morale were not over. In the frontlines he had to confront exposure to harsh weather and almost continuous combat. If enemy fire did not kill or wound him, then he still had to survive a host of other possible injuries, disease, and the specter of battle fatigue. The personnel losses to such nonbattle causes were enormous. The 28th suffered many thousands of such injuries during its European service. During the division's two weeks of fighting in the Huertgen Forest, there were more than 750 reported cases of trenchfoot alone.[6]

There are the factors that thesis will attempt to examine. The 28th's experiences still provide valuable lessons for today's military leaders. The army continues to demand that infantry units close with and destroy the enemy, under all conditions of weather and terrain. This requires personnel with unique skills and a high level of motivation. Lessons from the 28th show the perils of assigning ill-suited personnel to infantry units. The division's experiences also reveal the difficulties that units might fact integrating individual

replacements, particularly those units engaged in prolonged combat. The importance of individual and unit training programs in the combat theater, as well as the considerations of health and morale of soldiers, are also shown. In conclusion, this thesis will highlight the additional areas of research related to this study.

Endnotes

1. Stephen V. Benet, John Brown's Body. New York: Doubleday, Dorn and Company, 1927, p. 96.

2. The official U.S. Army term during World War II was neuro-psychiatric disorders. Medical personnel believed that use of that diagnosis should occur only in the COMMZ hospitals. It was found that soldiers labeled as neuro-psychiatric casualties had a much lower recovery rate than soldiers labeled as suffering from battle fatigue. Battle Facitgue implied to the soldier that all he needed as a little rest to recover and in many cases that was entirely correct. Shell shock was a term common in World War I and was seldom used during World War II terms. Battle fatigue is the term common in World War II terms. Battle fatigue is the term used in current U.S. Army field manuals, thugh neuro-psychiatric disorder is still the official medical term. Battle fatigue is used throughout this thesis to allow the reader to better relate to current doctrine.

3. Robert T. Palmer, "Procurement of Enlisted Personnel for the AGF: The Problem of Quality." Washington, D.C.: Historical Section, Army Ground Forces, 1946, pp. 27-30. Document located at the Combined Arms Research Library, Fort Leavenworth, Kansas.

4. Ibid., pp. 24-25.

5. U.S. Army, The Infantry Conference, Report of the Committee on Personnel, Policies, and Procedure, "Replacement Operations," Fort Benning, Georgia, 1946. Document located at the Combed Arms Research Library, Fort Leavenworth, Kansas.

6. U.S. Army, European Theater Headquarters, Historical Section. Combat Interviews, 28th Division, Hurtgen Forest Campaign 1944. Interviews conducted by CPT John S. Howe. Records located at the U.S. Army Military History Institute, Carlisle Barracks, PA.

CHAPTER 2

THE "BLOODY BUCKET" DIVISION

The 28th Infantry Division was one of 18 national guard infantry divisions that fought as part of the U.S. Army during the World War II. The 28th entered the war with a long and distinguished history. It was and still is, the oldest national guard division in the United States. Pennsylvania, in 1878, organized the division along the lines of a regular army unit. Many of its units traced their lineage to the early 1700's and a large number carried battle streamers for every one of America's major conflicts. During the World War I, the 28th fought from July through November 1918 and earned a reputation as a solid and dependable unit. General of the Armies John J. Pershing named it the "Iron Division," in recognition of its battlefield performance. The distinctive red keystone patch, emblematic of Pennsylvania soon led German soldiers to develop a more appropriate nickname, the Blutiger Eimer, the Bloody Bucket.[1]

The 28th's service during the Second World War began on 17 February 1941, when the division was federalized for active service at Fort Indiantown Gap, Pennsylvania. The activation preceded Pearl Harbor by almost a year and was part of America's unprecedented peacetime mobilization. The 28th, its national guard sister divisions, and nine regular army divisions comprised the total ground response of the U.S. Army to the events unfolding in Europe and the Pacific. The regular army divisions could stake a weak

claim on being combat ready units. The national guard divisions were far from combat ready; most lacked men and modern equipment and had seldom trained above battalion level since the end of the World War I.[2] Preparing a division for war would prove to be a difficult and lengthy process. It would take the 28th more than two and one half years to become ready for overseas deployment.

The hurdles that confronted the division were significant. The 28th underwent a major reorganization, endured a revolving door of commanders and senior leaders, and weathered a series of army personnel policies that stripped the 28th of many of its best soldiers. In many ways the stateside experiences of the 28th mirrored the problems the division would face in combat.[3]

Mobilizing in the winter cold of February, the 28th began a training program that concentrated on basic soldier skills. The first three months were spent on such skills as marksmanship, close order drill, map reading, and aircraft identification. Shortages of equipment remained commonplace and the division was more than 9,000 soldiers below its authorized strength of 22,000.[4]

The shortage of men was corrected in June 1941 when the 28th received more than 9,000 draftees into its ranks. The draftees came from a large portion of the eastern and southern United States. This large influx of personnel served to dilute the unique, home town quality that characterized national guard divisions. For the 28th, there would be other major personnel gains and losses during the succeeding years. Each personnel change would contribute to the gradual dissolution of its distinctive national guard identity.[5]

Draftees arrived at the division straight from their induction centers. Responsibility for individual basic training rested on the subordinate units of the division. After three months of individual skills training, the 28th had to abandon unit training and concentrate on training the incoming draftees. During stateside training the division would repeat this cycle on numerous occasions. Only when the division moved overseas in 1943 would replacements begin to arrive having completed a basic training course.[6]

In August 1941, although the 28th was still struggling with individual and small unit skills, the division moved to Virginia to participate in corps and army exercises. These large scale exercises continued through the summer and fall culminating in the massive Carolina maneuvers in November. These maneuvers were among the largest exercises in the nation's history and proved to be of enormous benefit to the army. These exercises revealed many areas of concern in the army's force structure and tactical doctrine.[7] For the regiments and battalions of the 28th, however, these exercises were much too large to provide quality soldier training, comments from exercise observers tended to support this conclusion. Soldiers demonstrated a lack of fundamental combat skills, and leaders received criticism for their inability to solve even the most basic tactical problems. The observers almost invariably recommended a "return to the fundamentals" training strategy for small units.[8]

The exercises also raised concerns among senior army leaders about the fitness for duty of many senior and junior leaders within the national guard divisions. A 1941 study found that almost 25 percent of national guard lieutenants were over the age of forty.[9] The age problem ran from the officer and NCO leadership at the platoon level all the way

up the chain to the division commander and his staff. The requirements of the new maneuver warfare doctrine were simply too demanding for many of these leaders. Prior to Pearl Harbor, it was not politically feasible for the army to change this situation. After the declaration of war, however, there was a tremendous purge of these overage leaders.[10] Although this action was desirable for the divisions, it nevertheless created turmoil within units and resulted in a shortage of junior leaders for many months.

America's entry into the war opened the door for sweeping changes within the national guard divisions. The rapid turnover in leaders was only one element of these changes. The army also resolved to strip the existing divisions of men to fill higher priority units. In effect, the 28th and many other national guard divisions became manpower reservoirs and training elements for America's massive war mobilization. For the 28th, this translated into a turnover of almost 36,000 soldiers in a two year period.[11]

As an example, from January through June of 1942, the 28th experienced the following losses in personnel: 2,000 volunteers for flight training, 2,500 soldiers departed for Officer Candidate School, 1,000 left to serve as cadre for a new infantry division, 1,500 became replacements for the 45th Infantry Division, and 400 volunteered for airborne training. This constant drain of manpower, followed by the arrival of untrained draftees, prevented the division from moving beyond basic soldier skills training to the more complex unit tasks.[12]

Unfortunately for American infantry divisions, personnel losses, such as those the 28th experienced, were all too commonplace. More than one division moving overseas received thousands of filler replacements virtually on the docks of their port of

debarkation. The training level of these replacements was inconsistent at best. Some units used the opportunity to rid themselves of their discipline problems and least capable soldiers. For the divisions deploying directly to combat in the Pacific or Mediterranean this was a very undesirable situation and resulted in needless casualties during the first days of combat.[13]

Another change the army was eager to pursue was the reorganization of the national guard divisions. Since the late 1930's many senior leaders in the army had argued for the reorganization of all infantry divisions to the new triangular structure. Regular army divisions had already converted to this smaller, more mobile configuration. National Guard divisions still retained the massive square division organization of the First World War. Orders went out to the national guard divisions to begin the reorganization in early 1942.[14]

For the 28th, this process began at Camp Livingston, Louisiana, in January 1942. At that time, the 28th was a huge division of more than 22,000 men. In contrast, the triangular regular army infantry division had a strength of slightly more than 15,000 men, but did include over 1,400 vehicles. The square division was built around two infantry brigades, each containing two infantry regiments (hence the square structure). An artillery brigade with three regiments and a small engineer regiment were the major combat support elements.[15]

The new triangular organization was based on three infantry regiments, each with three infantry battalions (hence triangular structure), an artillery regiment, an engineer

battalion, a mechanized reconnaissance troop, service battalion, medical battalion, and a signal company. For the 28th this meant the loss of the two infantry brigade headquarters, one infantry regiment, two artillery regiments, and one engineer battalion. The division lost more than 6,700 soldiers in the conversion but gained many vehicles. The more than 1,400 vehicles in the division made the 28th and other American infantry divisions among the most mobile infantry divisions in the world.[16]

Organizational changes were not limited to the divisional structure. The smaller fighting elements of the division also underwent significant change. Under the square division organization, the infantry rifle squad, the division's smallest fighting unit, consisted of eight men. This grew to twelve under the triangular structure and included a single Browning Automatic Rifle (BAR). This change came about from the First World War experience, where it was felt that the eight man squad was too small to withstand sustained combat. Three such rifle squads and a small headquarters formed a rifle platoon. Three rifle platoons, a weapons platoon, and a headquarters element composed a rifle company.[17]

The addition of the weapons platoon was the major change in the rifle company structure during the triangular conversion. The addition of the two light machine guns and three 60mm mortars of the weapons platoon provided the company with the direct and indirect fire assets to provide a base of fire for the maneuver of its rifle platoons. The authorized strength of the rifle company was fixed at 198 men, almost all of whom were fighters. By the 1940's, the rifle company was firmly established as the fundamental

fighting element of the division. A total of 27 rifle companies were organic to each infantry division.[18]

The immediate higher headquarters of the company was the infantry battalion. The battalion, which had reorganized under a triangular structure in the early 1920s, did not change significantly during the conversion process. Each battalion was composed of a headquarters company, three rifle companies, and one heavy weapons company. Three infantry battalions, an antitank company, a cannon company, a headquarters company, and a service company made up the infantry regiment.[19]

The three infantry regiments of the 28th, the 109th, the 110th, and the 112th each had a strength of slightly more than 3,000 men and were the principal maneuver elements of the division. Each regiment, with the addition of artillery, engineers, tanks, tank destroyers, and other supporting elements became the regimental combat team (RCT). These attachments made the RCT a very capable combined arms organization. The RCT could operate away from the division and it was not uncommon for the 28th to lose an RCT for extended duration's during combat.[20]

With its reorganization complete, the 28th turned its attention towards becoming combat ready. Unfortunately, the tremendous personnel losses discussed earlier, hit the division right on the heels of reorganization. By June of 1942, personnel turbulence had crippled the division's efforts to prepare for combat. The division was now almost a year behind schedule for overseas movement. This situation quickly drew the attention of both the Army Ground Forces (AGF) commander, Lieutenant General Lesley McNair, and the Army Chief of Staff, General George C. Marshall. General McNair relieved the division

commander, Major General Garesch Ord, after only five months in command. Major General Omar N. Bradley, then serving as the commander of the 82d Infantry Division, arrived in June 1942 to replace Ord. This change had an immediate and positive influence on the division.[21]

Bradley's first efforts were to fix the personnel problem. He used his significant influence and contacts within the AGF headquarters to reduce the losses in personnel to a manageable level. To fill the numerous leader shortages in small units he requested and received a new cadre of second lieutenants, fresh from the fledgling Infantry and Artillery Officer Candidate Schools (OCS). Bradley also tackled the last vestiges of Pennsylvania national guard politics remaining in the division. He took the drastic step of transferring every officer and non-commissioned officer (NCO) in the infantry companies and artillery batteries to new companies within the division. This last action was a direct assault on one of the most highly regarded beliefs in the national guard, namely, that national guard units fight better because they are able to remain together for long periods of time. Bradley found instead, that the practice led to home-townism, political deal making, and tended to make new replacements feel excluded from the organization.[22]

Bradley tackled unit training with the same aggressiveness. After the 1941 maneuvers, General McNair and the AGF developed a standardized training program for all armor and infantry divisions. Bradley saw to it that the division adhered to this standardized program. The AGF plan stressed fundamentals and training certification. Units progressed from individual training, through small unit training, then larger unit training, and finally concluded with division level exercises. At each level there were

proficiency tests that individuals and units had to successfully execute to move to the next level of tasks. Observers and evaluators from the IV Corps, the 28th's immediate higher headquarters, and the AGF were on hand to conduct many of the evaluations.[23]

Bradley's leadership and the reduced losses of personnel produced results within the 28th. By the end of 1942, after a solid performance in divisional and corps exercises, AGF inspectors deemed the 28th ready for its final training exercises. In January 1943, the 28th moved from Camp Livingston to Camp Gordon Johnson, Florida, for amphibious assault training. The division spent a miserable winter practicing beach assaults and becoming familiar with the variety of amphibious assault craft then entering service. The 28th also faced the challenge of receiving yet another division commander. Major General Bradley departed for North Africa in February and Major General Lloyd Brown became the 28th's fourth commander in two years.[24]

In June 1943, the 28th moved to Camp Pickett, Virginia, where it conducted amphibious training with the U.S. Navy. Mountain training in the hills of West Virginia followed in July. Finally, in early August, the division received orders to prepare for overseas movement. Gear was packed, inspections made, and in early October the division sailed from Boston, bound for Great Britain. After more than two and one half years, the division was finally on its way to war.[25]

The 28th arrived in Great Britain in mid-October and began the process of once more becoming a combat ready division. Travel time, combined with the time consumed preparing for departure, resulted in an almost total halt of training for more than three months. Upon arrival, still more time was lost drawing new equipment and moving

through a series of temporary billeting areas. It was not until December that the 28th was able to conduct scheduled unit training.[26]

From December until the middle of July 1944, the 28th trained in England and prepared for its entry into combat. These eight months were a mixture of good and bad conditions for the training of the division. From the personnel standpoint there was definite improvement. The rapid turnover in personnel that haunted the 28th in the United States virtually disappeared in England. On the downside, housing for personnel was so limited that the division had to scatter its units over a large area. The division also had to relocate units frequently based on the complex staging plans for newly arriving units. This dispersion and movement made it very difficult to administer an effective training program.[27]

The limited size of most training areas made them less than ideal for any training of larger than regimental size. Generally, training areas suitable for a division were scarce and competition for them was high. Given the limitations of facilities, the regiments devoted a great deal of the available training time to small unit, marksmanship and physical training. During one exercise the division required each regiment to complete a 100 mile foot march with all combat gear through the hills of Wales.[28]

By far the best training facility was the U.S. Army (ETOUSA) Assault Training Center at Woolacombe, England. This center provided individual and small unit instruction in a variety of combat skills, as well as the most realistic training possible for regiments in amphibious landings and assault of fortified positions. Each regimental combat team rotated through a three week course, that included two weeks of instruction

and one week of company, battalion, and regimental exercises. Exercises included extensive use of live ammunition, to include artillery and naval gunfire. An experienced cadre, most of whom were veterans of the North Africa and Sicily landings, operated the facilities and provided instructors. Another ETOUSA facility operated in Slapton Sands, England and allowed units as large as a division to conduct amphibious exercises. Unfortunately the 28th was not able to participate in training at this facility.[29]

Integration of all the combined arms the 28th would employ in combat was not entirely successful. Integration of armor was the biggest weakness. For a large part of its time in England the division had attached to it tank and tank destroyer battalions. Unfortunately, this was primarily for administrative support while the battalions waited on their vehicles and equipment. This slow process could take months. Normally when the battalions received all their equipment they moved on to other locations. Most training with tanks consisted of basic demonstrations of the capabilities and limitations of the vehicles. It was not until May that each regiment was able to rotate its battalions through a three day tactical exercise with tanks. Training with the organic division artillery was generally excellent throughout the period, although there was little opportunity to integrate non-divisional artillery units. The division also trained extensively with a variety of anti-aircraft artillery units.[30]

Despite the numerous constraints and limitations, the divisional training conducted in England contributed much to the proficiency of individuals and units. The absence of widespread personnel turnover was probably the single greatest advantage the division enjoyed during its eight month train-up. One battalion commander, commenting

on the poor performance of infantry replacements during the Siegfried Line fighting, bemoaned the fact that his replacements missed the valuable training in England, particularly the operations at the Assault Training Center in Woolacombe. Unfortunately for that battalion commander, by the time his unit hit the Siegfried Line there were precious few of the Woolacombe veterans left in the battalion's ranks.[31]

Training for the 28th ended in late June and the unit began preparation for its movement to France. It was late July, some six weeks after the D-Day landings, when the division landed in France and moved quickly to the front. Going ashore on Omaha Beach, the division marched inland to join the U.S. XIX Corps and on 31 July launched its first major attack into the hedgerow country of Normandy.[32]

The attack was not an auspicious start for the division. Losses were heavy and the division took three days to seize its initial objectives. The performance of the division during the next two weeks of heavy fighting did not appear to improve significantly. Losses mounted rapidly, particularly in junior leaders. Lieutenant General Bradley, the U.S. First Army commander displayed little patience for such performance. On 12 August he relieved the commander and assistant division commander of the 28th. Brigadier General James E. Wharton replaced Major General Brown, only to die the next day from a sniper's bullet during a visit to frontline units. Wharton's replacement, Brigadier General Norman D. Cota, was an experienced leader with a reputation for personal bravery. He had been a key figure in the formation of the Assault Training Center and had earned the Distinguished Service Cross for his heroism and leadership during the D-Day landings on

Omaha Beach. He would serve as the commander of the division throughout the remainder of the war.[33]

For most of August the division remained engaged in tough fighting in the infamous hedgerow country of northern France. This grim slugging match changed to rapid pursuit in late August following the Allied breakout from the Normandy beachhead. Moving on foot and by truck, the 28th raced eastward in pursuit of the German Army. During the last ten days of August the division moved more than 270 miles. For the infantry, most of those miles were on foot. On 29 August the 28th enjoyed the privilege of parading through the streets of Paris. The German commander of the city declared Paris an open city, so there was no fighting for the division. Instead there was the adulation of thousands of liberated Parisians. The parade actually diverted the 28th from its pursuit of the Germans, but provided a valuable American show of support for the government of the leader of the Free French Forces, Charles De Gaulle.[34] Whatever the purpose, the parade was a high point for many of the soldiers and leaders of the division.[35] The parade didn't last long. The division regained contact with scattered elements of the German Army on the eastern edge of the city and the pursuit was on again.

By the end of August, the 28th was well on its way to becoming a capable combat unit. It had suffered from the inevitable mistakes common for divisions during their first combat action. Although slow to get started, under the solid leadership of General Cota, the division was beginning to master the fundamentals required for success in combat. This gain in combat experience came at a high price. Little more than a month of combat had cost the division in excess of 2,000 casualties. Considering that approximately 80

percent of all casualties were infantrymen, this meant that the infantry regiments had lost more than 30 percent of their strength in riflemen. To make matters worse, casualties among small unit leaders made up a significant portion of these losses.[36]

It would take some time for the division to recover from such losses. The long supply routes and lack of trucks dramatically slowed the flow of replacements and supplies. Ammunition, particularly artillery, was in very short supply. Fortunately for the 28th, at the end of August, German resistance remained light and the weather was kind to soldiers. Disease and non-battle injuries for this period were very small. In the coming months this situation would change dramatically.[37]

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CHAPTER 3

COMBAT OPERATIONS

September 1944 began with the German Army in full retreat and the jubilant Allied armies close on their heels. For the Allies, the fight to breakout from the Normandy beachhead had been more difficult and costly than anticipated. The subsequent collapse of German defenses in August had caught them equally by surprise. Unable to mount a coherent defense, the German Army withdrew rapidly to the east and the most significant problem confronting the U.S. Army was moving enough fuel and ammo forward to maintain the pursuit. Attached to the U.S. V Corps, the 28th was one of the divisions struggling to keep up with the pace of the pursuit.[1]

Since the pursuit began in late August, the 28th had moved by a combination of vehicle and foot marches. During the first ten days of September the division moved from Paris to near the German border. Resistance was generally light, but for the infantrymen moving on foot the pace was exhausting. At last, on 11 September, the division halted along the German border near the northern tip of Luxembourg. Ahead of the 28th lay the Our River and beyond that, the German's vaunted Siegfried Line.[2]

On 13 September the 28th became the first American division to cross the German border in force and start the attack on Germany's Siegfried Line. This line of prepared defenses included anti-tank obstacles, concrete bunkers, fighting trenches, and thousands

and thousands of mines. Two rifle battalions, one each from the 109th and 110th Regiments, crossed the Our River under the cover of darkness just east of the Luxembourg village of Binsfeld. Reports from reconnaissance patrols conducted on 11 and 12 September revealed that most of the enemy defenses immediately east of the river were unoccupied. The patrols encountered almost no resistance.[3]

Despite such reports, the two battalions moved slowly, unsure of what lay before them. Resistance remained light and sporadic during the early hours of the attack, but even harassing fire was enough to halt the advance for a lengthy period. The division was critically short of ammunition and as a result, artillery support was almost non-existent. Specialized munitions required for clearing bunkers, such as pole charges, satchel charges, and bangalore torpedoes were not available. Even small arms ammunition was in short supply. Based on these shortages General Cota restricted the attack to the token effort of one battalion per regiment. (The third regiment, the 112th, was temporarily attached to the 5th Armored Division.) Under these circumstances it easy to see why units did not attack with a great deal of vigor.[4]

At the close of the first day the division had little to show for its efforts except casualties. The two attacks stalled well short of their initial objectives. Both units dug-in that night within sight of the first line of German pillboxes. The next day, Cota lifted the one battalion restriction and the two regiments continued the attack in force. There was also additional support from the division's artillery. The fire of these weapons, however, had little effect on the massive bunkers. One participant said the fire, "did little more than dust off the camouflage."[5] The units met with some small successes, but fierce German

counterattacks quickly erased the gains. One such counterattack on the night of 15 September quickly destroyed F Company of the 110th Regiment. A small German force from the 2nd SS "Das Reich" Panzer Division, well armed with automatic weapons and flame-throwers and supported by tanks, made quick work of the defending company.[6]

Operations on succeeding days were just as tough on the division. Machine gun fire from well-sited pillboxes pinned down units, and German mortar and artillery fire ravaged the ranks of the assault forces. Advancing under such fire proved to be a significant weakness of the infantrymen in the 28th. Immobilized by even small amounts of fire, the assaulting riflemen were then vulnerable to indirect fire from artillery and mortars. Leaders attempting to move the men forward quickly became casualties. This was the 28th's first real encounter with such fortified positions, and the skills required were much more complex than those they acquired during training in England. In addition, large numbers of the infantry replacements were fresh to the unit. Many were not even trained riflemen. In one battalion, 87 out of 100 replacements were hastily converted personnel from anti-tank and anti-aircraft units. The dwindling number of veterans had been in almost continuous operations for more than 50 days and were displaying considerable fatigue.[7]

On 17 September the division achieved a significant penetration when the 1st Battalion of the 110th Regiment captured a dominating hill mass near the town of Uttfeld. At this point the division was through the main line of defenses and into the immediate rear of the defender. The penetration, however, was dangerously thin; combat power to exploit the success was noticeably lacking. Other units assigned to V Corps were finding

the same tough resistance, and in some locations, enemy counterattacks pushed them back to the west of the Our River. Major General Leonard Gerow, the V Corps commander, took stock of the situation and on 17 September ordered all offensive operations to cease. Within days, much of the corps had withdrawn back across the Our.[8]

After five days of attacks, the 28th had run out of steam. Only limited progress was made during the operation, and the cost was very high for the division. During less than a week's fighting, the division incurred more than 1,900 battle casualties. Out of the casualties, almost 1,800 were infantrymen. During the same period, the division reported an additional 830 nonbattle casualties. The total casualties for the month of September eventually rose to more than 3,000. Included in this figure were 230 killed, 1,815 wounded, 141 missing, 63 captured, and 961 nonbattle injuries.[9]

It was at this point that the 28th first began to encounter its first significant numbers of battle fatigue casualties. The early fighting in Normandy occurred with fresh units that still possessed a high degree of unit cohesion. Most of the personnel in the infantry units had been together for at least a year and some for much longer than that. These strong personal bonds in small units were powerful deterrents to combat fatigue. During the fighting along the Siegfried Line, conditions were much different. The strong personal bonds that characterized the early fighting were rapidly disappearing, as casualties mounted and individual replacements flowed in. German resistance also played a big role, as it stiffened enormously at the Siegfried Line. After the rapid pursuit across France, many soldiers and leaders believed the war was virtually finished. The shock of heavy casualties and tough resistance had a demoralizing affect on the soldiers of the 28th.

Still another influence was the changing weather in the theater. September grew increasingly wet and cold, a harbinger of the very wet and very cold winter that was soon to arrive in northern Europe. Whatever the combination of factors, battle fatigue cases rose sharply in the 28th.[10]

Having lost much of its offensive punch, the mission of the 28th now turned to the defensive. Initially the 28th dug-in and defended the ground that it had gained at such a high cost. Units then conducted operations to eliminate bypassed pockets of enemy troops that remained in the division rear. The 112th RCT remained on detached service with the 5th Armored Division until early October. While operations continued on this reduced scale, the 28th was also integrating large numbers of replacements into its 27 rifle companies. During September, the division received 3,352 replacements, or an average of more than 100 replacements for each rifle company. This figure equated to roughly 50 percent of the company's strength.[11]

Out of the replacements, only 246 were wounded soldiers returning to duty. The small number of return to duty (RTD) soldiers is significant. RTD replacements constituted a very valuable component of the replacement system. These soldiers returned much needed experience to the units in the division. Division commanders fought a constant battle to ensure that their wounded soldiers returned to their unit of origin. The replacement system desired instead to place RTD soldiers in whatever unit needed replacements the most. It is easy to understand why division commanders fought such a battle for this valuable category of personnel.[12]

September ended with the 28th engaged in efforts to rebuild its battered units. The month had been a bitter one for the division. Its failure to breach the Siegfried Line was a hard one for the division to accept. As the soldiers stared across at the German line of fortifications, they realized that the enemy positions grew stronger each day. They also realized that they would soon have to launch a new assault to penetrate those defenses. It was a sobering thought after the heady days of August, when enemy resistance melted before the American advance. The 28th faced a new enemy now. This enemy might consist of cooks, youngsters, and grandfathers, but they were fighting on their home soil and enjoyed the advantage of prepared defenses. As the loss of F Company, 110th Infantry demonstrated, there was also a hard core remaining of the fighting force that had conquered much of Europe. As the cold rains of September fell on the soldiers of the 28th, there must surely have been those who realized they were *in for a very long and very* tough winter.[13]

The Quiet Time

During the month of October, the 28th enjoyed its first significant period of rest since its arrival on the continent in July. Occupying new defensive positions east of the Belgian town of Elsenborn, the division was able to rotate battalions to quiet rear areas for training, rest, and recreation. Due to the large numbers of replacements and their generally poor performance during September's fighting, V Corps published a detailed training program. The designated training priorities included: assault of a fortified

position, river crossing techniques, personal hygiene for winter months, patrolling, booby trap removal, defensive positions, and weapons familiarization.[14]

V Corps also noted significant weaknesses in the confidence and morale of replacements. Concern over this problem was such that the corps developed a unique arrangement with the headquarters tasked to provide combat replacements, the Ground Forces Replacement Command. Under this arrangement, the forward replacement companies identified replacements for future assignment to a specific division. These soldiers were then temporarily attached to that division for training. Their exposure to seasoned veterans was supposed to help allay the fear of the unknown that plagued so many of the replacements. At the end of a week the replacements returned to their holding company, hopefully with better soldier skills, improved morale, and a strong attachment to their future division. It is unknown how many of these replacements actually went to their designated units, but 250 of these soldiers would figure prominently in future combat with the 28th. It was however, a worthwhile effort at improving the morale and training of future replacements.[15]

The rest and recreation opportunities available to soldiers during this period were extremely limited. V Corps directed the establishment of a corps rest center, but this facility was not operational until the end of October. Furloughs for soldiers to facilities further in the rear, such as those in Paris, were also not available until late in the month. For the most part, the burden was on the combat units to establish some form of rest facility. This was difficult for divisions, given their limited support assets, and was

especially difficult when the division remained engaged in even limited combat operations.[16]

At this stage in the war, division rest facilities were practically non-existent. Instead, the regiments rotated battalions out of the line for rest and training. In a quiet sector regiments normally defended with two battalions forward and one battalion in an assembly area. The battalions periodically rotated between the forward positions and the assembly area. If the unit's frontage was not too excessive, the forward battalions might even rotate companies to a reserve position where soldiers might rest and train. In the assembly area the battalion could train, provide frequent hot meals, and allow soldiers to catch up on sleep and letter writing. Whenever possible, the regiment located the assembly area in a town that could provide warm, dry houses for soldiers to sleep in. While certainly limited in what they could provide, these rest facilities did much for the health and morale of soldiers. Surveys and interviews of soldiers indicated that facilities such as those described were wonderful tools for maintaining morale.[17]

If a unit was lucky it might have access to a Red Cross caravan in its rest area. These caravans were one of the most highly regarded services available to front-line divisions. An odd collection of military and civilian vehicles, it included doughnut and coffee making equipment, games, phonographs, and movie projectors. On a rotating basis these clubmobiles, as the Red Cross called them, set up in a division's rear area. Even during the race across France the Red Cross was able to catch up and provide services for soldiers. During September and October, these facilities produced more than 350,000 doughnuts for V Corps soldiers and served 140,000 cups of coffee.[18]

On few occasions was a regular infantry division able to enjoy the luxury of being pulled completely out of the line. There were simply too few divisions available for this to occur. At the beginning of October, there were only 24 infantry divisions and six armor divisions actually available for combat in the ETO. The British Army forces added an additional 18, the French contributed eight divisions, and the Polish Army one division. These 57 divisions were arrayed along a front that stretched from the North Sea south to the Swiss border, a distance of over 500 miles. Only the airborne divisions enjoyed the luxury of moving to secure rear areas for reorganization, rest, and training. Instead, infantry divisions that need to rebuild moved to defensive sectors located in supposedly quiet and inactive areas. These quiet sectors were not without hazards. The cost to the 28th Division during its month of rest in October included 59 soldiers killed, 519 wounded, and 433 nonbattle casualties.[19]

These quiet sectors did provide opportunities for green soldiers to gain valuable combat experience. Participating in small unit patrols was considered very beneficial for new soldiers. Contact during these patrols was generally very light, although there were exceptions. Normally these exceptions resulted when a patrol was careless and the enemy reacted with artillery and mortar fire. These patrols were also of great value to newly assigned leaders. Under the watchful eyes of an experienced leader, new officers and NCOs were able gain an appreciation for the terrain and also gain confidence in their ability to lead.[20]

On 25 October, the 28th Infantry Division boarded trucks and began movement north to a new assembly area in vicinity of Roetgen, Germany. The division had orders to

relieve the 9th Infantry Division and prepare to conduct an attack to seize objectives in vicinity of Schmidt, Germany. During October, the division received more than 1,400 replacements, only 124 of which were RTD soldiers. At the end of the month the 28th had 13, 997 soldiers present for duty, a shortage of approximately 250 personnel.[21] The division had been able to conduct limited training to integrate the large numbers of replacements received during September and October. Many veterans had also been able to enjoy a brief respite from combat. Poor weather during the period did much to cancel the positive influence of the rest period. The rains of September continued into October and temperatures steadily declined. Most soldiers in the division, particularly the veterans, still lacked winter clothing and overboots. Trenchfoot cases though, remained relatively low, due most likely to the tactical situation which allowed frequent rotation of soldiers to warming shelters. *Overall, after almost a month of quiet duty, the division was able to* report its combat status to V Corps as excellent.[22]

The Green Hell

The 28th Infantry Division completed the relief of the 9th Infantry Division on 27 October. Moving in to the 9th ID's sector was a horrifying experience for the soldiers of the 28th, particularly for the large number of soldiers without combat experience. The terrain was thickly forested and artillery had slashed trees into a variety of strange and frightening shapes. Scattered throughout the sector were the bodies of soldiers from the 9th ID. The heavy losses and difficult terrain completely overwhelmed graves registration personnel. Discarded equipment and trash lay everywhere. The ragged and shattered

appearance of the soldiers of the 9th ID also had a big impact on the 28th. The rumors of the heavy fighting in this sector of the front were proving true to the soldiers of the 28th. The popular nickname for this portion of the war was the "The Green Hell." The official unit history recorded the battle as the Huertgen Forest Campaign.[23]

The Huertgen Forest, as the entire area became known, embraced a thickly wooded section of Germany approximately 50 square miles in size. The forest consisted primarily of fir trees, planted so closely together that a man often had to crawl to get through them. Sunlight had a tough time penetrating through the trees and observers described the area as "dark and forbidding." As units advanced in the forest, the separation and isolation of individual soldiers was significant. In some areas it was possible to see only the man to your immediate front or flank. Navigation was difficult to impossible for many units. Numerous ravines, some quite large, such as the Kall River Gorge, cut the ground and blocked almost all movement. Roads and trails, the few that existed, were deep in mud. Moving supplies forward over these paths proved to be a major challenge. There were few battles in the ETO in which terrain had such an overwhelming physical and psychological effects on soldiers and units as did the Huertgen Forest.[24]

The enemy defenses were equally formidable, though soldiers in this sector were certainly not Germany's finest. For the most part they were the very young, the very old, and the infirm. A cadre of combat veterans provided the backbone for the units. Their defensive fighting power in this terrain was formidable and American soldiers were to learn a tough lesson about the effectiveness of well-led soldiers fighting from prepared

defenses. The Germans fought from camouflaged bunkers that had excellent interlocking fields of fire. The fires of automatic weapons extracted a heavy price from anyone that moved on the existing trails and firebreaks. The Germans planted thousands of mines in the area; many designed not to kill, but to maim instead. One mine was notorious for amputating legs and the male genitals. Artillery and mortars, though much smaller in numbers than those possessed by the Americans, were lethal and effective. The thick evergreens turned many of the rounds into devastating airbursts. Soldiers learned quickly that lying prone on the ground while receiving artillery fire was the worst possible thing to do. Instead, soldiers learned to crouch or stand close against a tree, minimizing the bodily surface area they exposed to the blasts.[25]

To make matters worse for the 28th, a fresh division, the 272d Volksgrenadier Division was in the process of relieving the 89th Infantry Division in the sector. An additional German division, the 116th Panzer, was also in a position to counterattack the 28th. This meant that the 28th would face elements of up to four divisions during its attack in the forest. It was small consolation that most of the German units were badly understrength. Given the harshness of the terrain, this was a formidable defensive force. The combined effects of the enemy and terrain created one of the most difficult barriers an attacking force could ever hope to encounter.[26]

The withdrawing 9th ID endured almost two months of heavy fighting in this frightful landscape and suffered more than 4,500 casualties. The division had little to show for its efforts. It had captured few of its assigned objectives and penetrated the forest to a depth of only 3,000 yards. This was a best effort from one of the most highly

regarded infantry divisions in the U.S. Army. Before the fighting ended in the Huertgen, eight American infantry divisions would fight in the forest. The average casualty total per division was more than 4,000 men. The 28th would fare worse than any of them.[27]

The 28th launched its attack on the early morning hours of 2 November. A massive artillery barrage, one hour in duration, preceded the attack. Division and corps artillery units fired almost 12,000 rounds in support of the 28th. Fighter aircraft were scheduled to support the division, but poor weather limited their employment. Given the difficult terrain, the first day of the attack started well for the division. Two regiments, the 109th and the 112th, enjoyed mixed success, seizing portions of their assigned objectives and then digging-in for the night with only light casualties. The 110th Regiment, attacking in the south, met very stiff resistance. Casualties were heavy for the regiment and by nightfall it was fighting to hold onto its original start-line for the attack. Some rifle companies lost almost two-thirds of their strength on that very first day.[28]

The second day of the operation was an enormous success for the 28th. The 3rd Battalion of the 112th Regiment launched its attack at 0700, advanced swiftly against light resistance, and by 1430 captured the town of Schmidt, the division's primary objective. The 9th ID had fought unsuccessfully for weeks to capture this town. A state of euphoria swept the division and corps headquarters. Unfortunately, the 3rd Battalion was the only unit from the 112th that reached Schmidt on 3 November. The battalion was also without armor support. The only route into Schmidt open to the division was the Kall Trail and this route was proving to be nearly impassable for armor. The 3rd Battalion was dangerously exposed and its only anti-tank weapons were mines and bazookas. Its

soldiers were also cold, wet, and exhausted. Leaders and soldiers alike sought out warm buildings during the night and prepared only the most rudimentary of defenses. The battalion sent out no patrols during the night and as a result, the commander was blind to what was around his unit.[29]

The 109th and the 110th made no progress on 3 November. In the south, tough German defenses continued to hold the 110th in check. Casualties for the regiment mounted steadily. The infantry units, unsupported by tanks, continued to force the assault despite the heavy casualties. By the end of the day, they still had nothing to show for their sacrifices. In the north the initial success of the 109th Regiment also ground to a halt. At dawn the 109th fought off two counterattacks and subsequently canceled plans for its own attack toward the town of Hurtgen. Much like the forward elements of the 112th, the 109th found itself surrounded on three sides by well dug-in defenders.[30]

Disaster struck the 28th during the early morning hours of 4 November. A strong German counterattack composed of armor from the 116th Panzer Division and infantry forces from the 89th Infantry Division struck the 3rd Battalion in Schmidt just after dawn. German artillery conducted a brief but fierce shelling of the town immediately prior to the German assault. The shelling stunned the American infantry in their hastily prepared positions. The German infantry made good use of the artillery barrage and attacked the town from almost every angle. German tanks, impervious to the rifle and bazooka fire of the American infantrymen, followed close on the heels of the attacking infantry. Due to communications difficulties American artillery did not begin to provide support until the German attack was over an hour old. Confusion within the 3/112th grew rapidly and soon

turned into panic. Soldiers began to flee for the woods and leaders lost all semblance of control. In little more than three hours of fighting the Germans recaptured Schmidt and the 3/112th ceased to exist as an effective combat force.[31]

The German counterattack next struck the 1/112th, defending the village of Kommerscheidt. Here the American defenses were better prepared and had armor support in the form of three Sherman tanks. Leaders also rounded up and put into the line approximately 200 of the panic-stricken soldiers from Schmidt. The defenders beat back the German attack, though not without substantial losses. Early the next morning, nine tank destroyers and six tanks further reinforced the position at Kommerscheidt. This discouraged any immediate German efforts to launch another counterattack.[32]

Fighting on 5 and 6 November took on a confusing and fragmented pattern. Small unit engagements occurred in the zones of all three regiments. The 110th Regiment had settled into a battle of attrition with the enemy. Progress was impossible given the ferocity of the enemy resistance, the well-positioned obstacles, and the difficult nature of the terrain. Soldiers of the regiment dug-in almost within hand grenade range of the enemy. Each day they received new orders to attack and each day leaders forced men from their holes. Within minutes, the advance would be halted and soldiers would return to their cold, wet foxholes. Such persistence almost completely shattered the offensive capability of the 110th.[33]

In the north, the 109th was also subjected to strong German pressure, but managed to hold on to its positions. In this portion of the forest, it was difficult for the Germans to support their attacks with armor. The lesson for both forces was that even in

this restrictive terrain, attacks without armor support had little chance of success. The Germans managed to briefly cut the only supply route into Kommerscheidt, but a small American task force of armor and infantry reopened the Kall Trail on the morning of the sixth. The situation for the 28th was growing worse by the hour. By now the regiments discarded all thought of further offensive operations, they were instead fighting for their lives. Incredibly, the division continued to order units to attack, few of which complied.[34]

Many of the infantry companies were now well below 50 percent strength. The 28th had lost all offensive capability and was fighting to survive. The division began to push replacements forward; at the head of the line were the 250 soldiers that the division trained in October. Brought forward during the night, these frightened and inexperienced soldiers were put into foxholes with little or no training. As an example, on 8 November, the 2/112th Infantry, with an authorized strength of approximately 850, received 515 replacements. Even more incredibly, the battalion received the mission to attack on the following morning. It was impossible for any unit to accept such large numbers of replacements and remain an effective force. For the unfortunate replacements it was almost a case of murder. Many of them would be evacuated at each sunrise, victims of trenchfoot, battle fatigue or enemy fire.[35]

The enemy was not the only source of casualties within the 28th. The cold and wet weather, with temperatures hovering around freezing, took a terrible toll on soldiers. Trenchfoot and respiratory infection cases skyrocketed. Many soldiers were still without necessary cold weather clothing items such as overboots, field jackets, woolen caps, and long underwear. The continual lack of hot rations also damaged the health and morale of

soldiers. Rations consisted of cold K-Rations or C-Rations and many soldiers ceased eating. The situation was much too dangerous to risk bringing hot meals or drinks forward. The soldiers were also unable to build fires, since their proximity to the enemy was sure to draw rifle and mortar fire. Less than a week into the operation the division was virtually worn out as a fighting force.[36]

On the morning of 6 November, another infantry battalion collapsed. This time it was the 2/112th, defending an exposed position along a ridge near the town of Vossenack. The battalion had been subjected to almost continuous fire from German artillery for three days. Soldiers, most of them green replacements, had become so demoralized that leaders had to force them to eat and drink. Finally, they were pushed beyond the breaking point. Imagining themselves about to be overrun, first one soldier, then another began to head for the rear. The panic became overpowering for many of the soldiers. The efforts of officers and NCOs could halt only a small percentage. There had been no German counterattack, only blind panic. The 2/112th was left with only a thin line of resistance holding half of the town. An engineer battalion rushed in to bolster the defenses. The next morning the engineers attacked and within hours cleared the remainder of Vossenack of German resistance.[37]

The next day the Germans struck the 1/112th in Kommerscheidt, protected from air attack by a steady winter rain. The defenders held firm initially, but gradually began to pull back under the weight of the German attack. The 1st Battalion conducted its withdrawal in good order and managed to reestablish a weak defensive line just outside the town. The panic that afflicted the other two battalions of the 112th did not occur in

Kommerscheidt. Nevertheless, by the end of the day, the defenders had been pushed from the town. The following day, this small group of infantry and armor, along with other scattered elements still on the east side of the Kall River, withdrew to the west bank. This withdrawal effectively ended offensive operations for the division. The division ordered further attacks in the zones of the 109th and 110th Regiments. The units executed the attacks with little determination and achieved nothing except to add to the division's casualty totals.[38]

Finally, on 14 November, the Huertgen ordeal came to an end for the 28th Infantry Division. The U.S. 8th Infantry Division moved forward and relieved the 28th and prepared to begin its own ordeal. The 28th moved to a quiet sector 40 miles to the southwest and received the mission to defend a sector 25 miles in width. The division moved by truck and closed into the new sector by 22 November. The quiet sector was located just to the east of the Belgian town of Bastogne.[39]

As units tallied up their losses the tremendous cost in lives became obvious. Division combat casualties totaled 6,184, a figure that exceeded the total strength of every rifle company in the division. Losses included 614 killed, 2,605 wounded, 855 missing, 245 captured, and 1,865 nonbattle casualties. More than 750 of the nonbattle casualties were from trenchfoot alone. The fighting proved to be one of the costliest division operations of the entire war.[40] To make matters worse, the leadership of the rifle units continued to absorb terrible losses. Officer losses alone totaled 249 out of an assigned officer strength of 828, roughly one officer in three. Losses among NCOs were not specified, but were probably as bad or worse. Many of the leader losses resulted from the

poor fighting performance of soldiers. Significant numbers of replacements and even a few of the experienced soldiers lost almost all ability to fight. This required small unit leaders to constantly expose themselves to enemy fire as they moved among their men, trying to drive them forward. Losses were not limited to the leaders in rifle companies. One regimental commander and three of the nine battalion commanders in the division were also casualties.[41]

The two great unseen enemies of infantry divisions, battle fatigue and trenchfoot, also contributed significantly to the casualty rate. Soldiers suffering from battle fatigue, primarily new personnel but with increasing numbers of veterans, lost all will to fight. In the worst cases, soldiers would not eat or perform even the basic functions of personal hygiene. In some cases unit leaders ordered the evacuation of battle fatigue victims, other victims simply wandered back through the lines to the nearest aid station. The problem started to surface during the Siegfried Line fighting, but became much worse in the Huertgen Forest battle. Based on its earlier experiences the division already had a special "rest camp" established for battle fatigue cases. General Cota directed the establishment of the rest center in August and staffed it despite the lack of TO&E resources. Like many senior officers he believed that a little rest, a hot meal, and a structured environment were the proper elements to restore a soldier to fighting trim.[42]

Trenchfoot also contributed to enormous casualty rates. Although the rate of trenchfoot cases did not approach the level of the First World War, it continued to have a destructive effect on infantry personnel. From October 1944 to April 1945 there were more than 70,000 soldiers in the ETO hospitalized for trenchfoot. More than 90 percent

of the casualties were infantrymen. Less than 50 percent of these soldiers would ever return to combat duty. Many would spend long convalescent periods in stateside hospitals and amputation was not uncommon.[43] Soldiers with trenchfoot were normally out of action for several weeks to several months. A major cause of trenchfoot in the 28th was a lack of adequate footwear and extra socks and most importantly a failure of leadership. During the Huertgen Campaign only about 15 percent of soldiers had winter socks and overshoes. Many of the leaders were converted from other specialties such as anti-aircraft units and were fighting in their first battle.[44]

Recovery

Even before the division closed into its new area of operations, the reconstitution process had begun. Replacements poured in at such a rate, that by the end of November the division stood at almost 100 percent strength. Elements of the 112th Infantry Regiment, the first unit to be pulled from action, moved to rear assembly areas, received new clothing and in some cases weapons, and ate their first hot meals in many days. When the division closed into its new sector, it repeated this process with the other units of the division. A few of the veteran soldiers received furloughs to visit Paris; others rotated through the newly established division rest center in Wiltz, Luxembourg. Rotation of troops between the line and regimental rest facilities also provided opportunities for soldiers to get hot meals, a shower, and a chance to sleep in a warm and dry bed. Gradually the strength of the 28th began to rebuild, although it would take some time to recover from the severe mauling it received in the Huertgen Forest.[45]

December found the 28th still recovering from its wounds defending a 25 mile front along the Luxembourg-German border. Its assigned frontage was so great that units manned a series of strongpoints instead of a continuous line of resistance.[46] These strongpoints generally controlled the major road networks in the sector. The strongpoints were, for the most part, built around the small villages and towns scattered throughout the sector. This positioning allowed units to rotate soldiers into shelters for rest, minimizing exposure to the tough winter conditions. Soldiers also continued to rotate to divisional and corps rest centers further to the rear. Red Cross clubmobiles and doughnut wagons made their visits and there was a full schedule of USO shows and dances to help raise morale.[47]

As units began to become effective organizations once more, training activities stepped up. Limited combat missions, primarily intelligence gathering patrols, remained excellent training vehicles to build the experience level of new soldiers and leaders. Units also engaged in foot marches, techniques for assaulting bunkers, and basic infantry skills. The basic infantry skills training was particularly important, for by this time in the war a large number of the replacements were not infantrymen by training. The insatiable demand for infantry replacements forced the army to convert large numbers of specialty troops into riflemen. Two of the larger sources for such conversions were anti-aircraft artillery units and the air force. The ETO also converted significant numbers of soldiers from the service troops in theater. Limited duty soldiers, soldiers who were no longer fit for combat due to medical reasons, took the place of the service troops.[48]

A unique source of manpower was also beginning to show up in the replacement system during the latter part of 1944. These were soldiers from the Army Specialized Training Program (ASTP). This program offered duty at a college or university for selected individuals that enlisted in the army. Its purpose was to attract high quality volunteers away from the navy and marines and was open only to soldiers that scored in the highest categories of mental ability. By 1944, the army could no longer afford to have so many soldiers unavailable for combat and made the decision to eliminate the program. Instead of sending these trainees to become officers, as many thought they would, they went instead into the general replacement pool. More than 70,000 ASTP trainees entered the replacement flow in 1944. There was even a special distribution plan to ensure that each infantry division received an equitable allocation of these potentially high caliber soldiers. Whatever their source, the replacements that joined the 28th in late 1944 were a cut above their predecessors. There was a noticeable rise in the quality of the 28th's infantrymen. The German Army would soon provide them an opportunity to demonstrate their fighting abilities.[49]

The Battle of the Bulge

The success of the division's reconstitution effort was put to the test during the early hours of 16 December. Massed to the east of the 28th were elements of the 5th Panzer Army, a total of eight divisions, including four tank divisions. The German assault, commonly known as the Ardennes Offensive or the Battle of the Bulge, caught the 28th and the entire allied army by surprise. German infantry units easily infiltrated the thinly

held front of the 28th. The 110th Regiment in the center had a frontage of some fifteen miles. It was this regiment that received the heaviest blow from the German assault.[50]

The regiment, sitting astride one of the major routes to Bastogne, received orders to hold at all costs and they did just that. Fighting from a series of isolated company strongpoints, the 110th provided stiff resistance. From the very first day the division and regimental headquarters lost all ability to control the battle; forces were simply too scattered and the German attack too large. The bypassed units, however, maintained tough defenses for almost two full days. This heroic defense helped provide the necessary time for the 101st Airborne Division to occupy the key town of Bastogne. This feat was particularly remarkable given the fact that more than 50 percent of every line company consisted of soldiers fighting their first battle. Some of the defenders were able to escape and make their way to the west, but the Germans managed to kill or capture the majority of the 110th soldiers. For the second straight month the 28th had one of its regiments almost completely destroyed.[51]

To the north, the pressure on the 112th Infantry Regiment was not as great on 16 December as it was for its sister regiment, the 110th. The 112th also held a front some ten miles shorter than that of the 110th. Initially the regiment was able to hold its ground, but by 17 December, the pressure from infiltrators in the unit rear was becoming too much to ignore. Gradually the regiment began to withdraw to the west of the Our River, maintaining good order as it executed this tough task. Despite the heavy fighting and the confusing situation, the regiment remained intact as a fighting force and struck the German attackers a stiff blow.[52]

On 18 December, the regiment found itself completely cutoff from the remainder of the 28th. For the remainder of the battle the regiment would fight under the control of other divisions, including the 106th Infantry Division and the 82d Airborne Division. It played a major part in the desperate fighting to hold the northern shoulder of the German penetration. For its actions during the Battle of the Bulge, the 112th Infantry Regiment was later awarded the Presidential Unit Citation. This was a remarkable turn-around for a unit that had two of its battalions collapse and flee the battlefield during the Huertgen Forest Campaign.[53]

In the south, the 109th Infantry Regiment faced a situation similar to that of the 112th. From the very first day of the attack, the 109th was cut off from the remainder of the division. The fighting power of the regiment remained strong, however, and the 109th did not withdraw from its initial positions until the evening of 18 December. That night, the regiment withdrew further to the south across the Sure River, later blowing two important bridges. The 109th managed to withdraw in good order and remained an effective fighting force. On 19 December the regiment passed to the control of the 10th Armored Division. Along with the 4th Infantry and elements of the 9th Armored Divisions, the 109th would help form the southern shoulder of the German penetration.[54]

The actions of the 28th during the Battle of the Bulge were by all measures an enormous success, albeit one that came at a very high cost. The 110th Infantry Regiment provided the critical time necessary for the 101st Airborne and other forces to secure the town of Bastogne. The 12th Army Group commander, General Omar Bradley, considered

the actions of the 110th as one of the decisive elements of the battle. In his book, A Soldier's Story, he wrote:

> In valor, however, neither (the 7th Armored and 4th Infantry Divisions) had outshone the broken and bruised 28th. Though overrun by the first wave of Germans that moved out of the mists of the Eifel, the 28th split into a forest full of small delaying units. For three sleepless days and nights the embattled troops of that division backed grudgingly towards Bastogne buying time for the reinforcement of that anchor position.[55]

Both the 109th and 112th Infantry Regiments performed equally well as they fought to hold the shoulders of the German penetration. The division's reconstitution efforts following the Huertgen Forest Campaign proved to be extremely effective.[56]

As the Battle of the Bulge came to a close, the 28th once more began to rebuild its broken units. Casualties during the fighting in the Ardennes were very high. The 110th virtually ceased to exist as a regiment and suffered more than 2,500 casualties. The 109th and the 112th fared better, sustaining heavy casualties but remaining intact as regiments. During this reconstitution process the division drew on the valuable experiences gained in the wake of their Siegfried Line and Huertgen Forest campaigns. These lessons proved very beneficial in the aftermath of the Battle of the Bulge. Less than three weeks after the division ceased operations in the Ardennes, it received new orders to move south and begin preparations for offensive operations. By the end of January the division would be heavily involved in offensive operations to eliminate the Colmar Pocket in the Vosge Mountains of France.[57]

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CHAPTER 4

MANNING THE INFANTRY FORCE

> We received a certain amount of replacements; but I can think of making this easier, at least my mind tells me, it would be simplified and more practical to shoot them in vicinity of their debarkation, as to make the attempt to return the bodies from where they fell and to bury same. It takes manpower to transport them back, and gasoline and manpower to bury them. These people could have fought as well and been killed too.[1]
>
> Ernest Hemingway

During World War II, Ernest Hemingway served as a war correspondent in the ETO and frequently operated with the U.S. 4th Infantry Division. When he set these words to paper, the 4th Infantry Division was in the midst of its own ordeal in the Huertgen Forest. Following close on the heels of the 28th Division, the 4th fought for nearly a month and incurred almost 6,000 casualties, more than 4,900 replacements poured into the division during this month. Hemingway's remarks could just have easily described the experiences of the 28th Division or those of the 1st Infantry Division which also suffered heavily in the Huertgen Forest. Probably no other battle in the ETO so graphically demonstrated the profligate waste of lives that was characteristic of the American system for manning infantry units.[2]

To use the term "system" is rather inaccurate, there never existed a clear plan of how the army would keep its small force of infantry units filled with riflemen during

combat. Instead, the army patched together a collection of systems and a collection of plans, all of which were inadequate to meet the demands of modern warfare. The army underestimated not only what those demands would mean in terms of quantity of infantrymen, but in terms of quality as well. Realization of these planning errors came late in the war and the army had to resort to a wide variety of stopgap measures to keep its combat units operational. That units eventually overcame the effects of such measures is a tribute to the soldiers and leaders of the squads, platoons, companies, and battalions that fought the ground war. That units had to endure such measures is a condemnation of the "system" that needlessly sacrificed the lives of American soldiers.[3]

To attach blame for the failures of this system is a difficult task. No single person nor organization stands out clearly. It was a combination of decisions and actions at virtually every level that eventually produced the U.S. Army personnel system. To best analyze these actions it is beneficial to consider the principal organizations in relation to the three levels of war: strategic, operational, and tactical. The War Department and ETOUSA comprised the strategic level of the manning system. The operational level included army groups and field armies, as well as the actual operator of the theater replacement system, the Ground Forces Replacement Command. Corps, divisions, and regiments formed the tactical level.[4]

The Strategic Environment

Before proceeding further it is important to establish the strategic environment that existed from September to December 1944. It is easy in today's age of computers and

satellite communications to lose perspective of military operations in 1944. The infantry force the entire ground combat force was only one element of America's war effort. Understanding the enormity of that effort is essential to the analysis of the decisions that shaped the personnel system in the ETO.

The American infantry divisions of the Second World War were products of the largest military mobilization effort in the nation's history. America's total military force stood at over 11,000,000 soldiers, sailors, airmen, and marines by September 1944. In comparison, America's mobilization effort for World War I totaled less than 5,000,000 personnel. America's most recent effort, the Gulf War, was less than one-fifth the size. Equally enormous was the worldwide nature of America's military operations in the Second World War. At the peak of combat in 1944-45 the armed forces fought in six major theaters that spanned the globe. America also operated a massive worldwide logistical infrastructure that supported both American and Allied forces. By any standard of measure, America's war effort was an incredible accomplishment.[5]

The U.S. Army was the largest service component of the armed forces and in September 1944 consisted of approximately 8,000,000 soldiers and airmen. Of this figure, slightly more than 2,000,000 men served in the ground combat forces (AGF). Ground combat forces included both divisional and nondivisional combat units as well as the combat service support units found within divisions; from this total, the army organized 89 combat divisions. The infantry force, to include airborne, dismounted cavalry, and mountain, comprised 73 divisions. Total strength in infantry personnel for these divisions and including separate infantry regiments and the infantry battalions assigned to armor

divisions was less than 850,000 soldiers.[6] The actual infantry strength of the army was approximately 11 percent of the overall force structure. Separating out the Army Air Forces, infantry formed approximately 17 percent of the 4,900,000 man army ground force and 39 percent of the ground combat force. In the ETO, 47 infantry divisions, nine separate infantry regiments, two armored infantry regiments, and 39 armored infantry battalions comprised the infantry force. Infantry represented 16 percent of the total army strength in theater and 36 of the ground combat force[7]

The other major element of the strategic environment was the transportation effort required to move army elements to the overseas theaters. This was a monumental undertaking, particularly given the strength and effectiveness of German U-Boat forces in 1942-43. With the exception of long range bombers, virtually every soldier and every piece of equipment had to move by sea. A standard infantry division required some 35,000 shipping tons to deploy overseas and required additional shipping to sustain it in combat. The total shipping required to support a large theater totaled almost one ton per man per month.[8] More than 2,000,000 tons of supplies poured into the ETO during the last half of 1944. Even within theaters there were transportation considerations. In November 1944 the ETOUSA commander, General Dwight Eisenhower, had a total of 41 American divisions in the theater. Deployed on the continent in the combat zone were only 34 divisions. Some of these non-committed divisions constituted a theater reserve but the majority were held back because of the inability to fully sustain the forces already in combat on the continent.[9]

From the strategic perspective, the army's senior leadership faced an overriding challenge of balancing war aims and objectives with available military manpower and transportation. The heart of the challenge was to accurately determine the force structure required to achieve future strategic objectives. Resources, particularly personnel, had to then be allocated to make that force structure a reality. This all took time and unfortunately for the planners the strategic plans constantly changed. The army never seriously considered in early 1942 that in the near future it would have to fight in North Africa or Italy, such changes drove the army to repeatedly alter its force structure. In one month the army needed 50 truck companies; the next month it needed 200 and it needed them right away. The bill payer for these changes was all too often the combat units. Commanders in the ground forces became alarmed by the ever shrinking combat force, not only of infantry, but of all the ground combat arms. Ground combat forces dropped from 52 percent of the total army in 1941 to 33 percent in 1944. In contrast, the ASF expanded from 26 percent to 38 percent.[10] Explaining the small size of this combat force, the operations division of the War Department observed:

> [the small size of the ground combat force] is a natural result of a diminishing need in the actual numbers of assault troops due to mechanization of the Army, i.e., the great masses of armor airplanes that prepare the way for the final assault of the foot soldier with resultant saving of human life. While decreasing the actual number of assault troops needed in battle, these engines of war require a large and more extensive line of communication. The assault trooper is still the cornerstone of the offensive. However, mechanization has made him more efficient in the carrying out of his duties and he is not now needed in the great numbers formerly demanded when assaults consisted mainly of human blows against defended positions. [11]

This explanation illustrates quite clearly the mind set that permeated much of the strategic planning staff of the U.S. Army. Combat troops were the "cornerstone" of offensive operations but they were not needed in large numbers. Instead it was the air and service support branches that had to grow to meet the demands of modern warfare. The decision to organize only 89 combat divisions is easy to understand in the light of this rationale.

The tough infantry combat that characterized almost every theater of operations disproved the soundness of the War Department's fixation on the mechanization of war. Planners saw machines paving the way for the infantry, but too often it was the infantry that had to pave the way for machines. The tough fighting in Italy during 1943 and early 1944 opened the eyes of many to the limitations of machines. The same was true in the ETO, particularly during the grim months of September to December 1944. The army had to cannibalize stateside divisions and hastily convert personnel from a wide variety of specialties to meet the demands for infantry replacements.[12]

Closely tied to the issue of size of the ground combat force was the aspect of transportation. With vast requirements for shipping, the army had to make tough decisions on what forces went overseas and when. The combat divisions did not necessarily receive the highest priority for overseas movement. In November 1944, 13 infantry and three armored divisions still awaited overseas movement from the United States.[13] Coupled with the transportation limitations that existed in the ETO, it is easy to understand why the 28th Infantry Division had to occupy a 25-mile sector after its mauling in the Huertgen Forest. It is also easy to understand why six American infantry divisions

exceeded 270 days of combat in less than a year of active campaigning.[14] The small number of divisions and the slowness with which they moved overseas had a tremendous influence on small units and the individual soldier. The official history of the army ground forces ultimately concluded:

> During periods of active combat an infantry division suffered about 100 percent casualties in its infantry regiments every three months. While the gaps caused by these losses were generally filled by the continuous stream of replacements, divisions suffered in efficiency with such a high turnover of infantry. A severe mental strain was imposed on the individual soldier, especially the infantryman, who felt that no matter how long he fought or how long he survived the dangers of combat he must remain in action until removed as a casualty. Cases of battle neurosis multiplied from this cause. Or men simply became tired, and when tired more easily got themselves killed, wounded, or captured. The stream of replacements thus flowed into somewhat leaky vessels. Had more units been available to relieve units in battle, not only would the strain of combat soldiers have been eased, but some saving of manpower would probably have resulted.[15]

Unfortunately for infantry units, quantity of personnel was not the only factor considered in the allocation of available manpower. The War Department also allocated personnel to the branches on the basis of quality. For much of the war the ASF and the AAF received a disproportionally high percentage of the highest quality recruits available to the army. Prior to 1944, 43.6 percent of the recruits assigned to the infantry scored in the lowest two mental categories of the Army General Classification Test (AGCT). This compares unfavorably to the AAF which had only 20.3 percent in the lowest categories, and to the ASF which averaged less than 30 percent. In the highest two categories the differences were equally pronounced. Only 27 percent of the infantry was in the upper categories, compared to 42 percent and 52 percent in the AAF and ASF respectively.

Infantry recruits were also likely to have less education, be shorter and weigh less than recruits in the ASF or AAF.[16]

There were numerous reasons for such disparities. Some were deliberate acts of policy while others were the result of flaws in the system. The fixation on mechanization in the War Department continued to manifest itself in the allocation of high quality recruits. Both the AAF and the ASF convinced the War Department of the unique demands of their services. Their argument claimed that advanced and expensive machinery demanded the highest quality personnel to operate and maintain it. The War Department also made allocations based on the need for rapid expansion of the AAF and ASF during 1942, while it envisioned that the infantry would have a longer time to prepare for combat. A rapid expansion required soldiers who could learn quickly and operate with little supervision.[17]

It was also desirable from an efficiency standpoint to tap in to the large reservoir of personnel that already possessed technical skills. A mechanic or a plumber in the civilian world required little training to be a mechanic or plumber in the army. Unfortunately for the infantry there were precious few civilian skills that translated to the combat specialties. Thus the supposed best use of a craftsman who might have made an excellent rifle squad leader, was in the technical branches. Segregating personnel by occupational skills classification hurt the combat arms. The ASF, which ran the induction and reception centers, received carte blanche to draw upon personnel with occupational skills. This was above and beyond the distribution based on AGCT scores.[18]

Efficiency was not the only reason the army placed such importance on classification testing. Also important was the satisfaction of soldiers. A satisfied soldier was a happy soldier; a happy soldier was a productive soldier and productive soldiers were what the army wanted. A happy and productive soldier was also likely to be a potential voter that did not complain to his congressman. In the early days of the mobilization effort, the army had to deal with queries from congressmen who wanted to know why Private Smith, a member of their district and a skilled carpenter was now a rifleman in an infantry company. The army certainly attempted to forestall such questions but it was likely that the perceived efficiency of occupational classification was what kept it as a primary element of the overall classification process until well into the war.[19]

Other vagaries in the reception and processing of personnel added to the quality differential. As mentioned, the ASF operated the induction and reception centers and was able to use this for its benefit. The AAF enjoyed a considerable advantage in its selection of aviation cadets. These cadets came from volunteers throughout the army and had to meet mental and physical standards higher than those required for OCS. Those cadets that failed to meet the standards for aircrew did not return to their former units, nor even their former specialties. Instead, the AAF retrained these men for a variety of service positions. An infantry unit could therefore lose a soldier with OCS or NCO potential who might very well end up as aircraft engine mechanic or truck driver. It was not until 1944 that this policy ended and the AAF had to restrict recruiting to within its branch.[20]

Not to be discounted in the distribution of personnel was the unpopularity that infantry enjoyed not only with recruits, but with infantrymen in units. Infantry was the

least popular branch in the army, only 11 percent of the soldiers in that branch desired infantry. Reason cited in surveys included the physical danger and hardships, as well as a lack of publicity and meaningful vocational training. It also did not help that infantrymen were among the lowest paid soldiers in the army. Technicians received technical pay and worked in specialties that offered more room for promotion. In 1943, the average soldier in the air corps earned more than $1100.00 per year, not including flight pay and in the ordnance branch a soldier earned $825.00 per year; the average infantryman earned only $700 per year.[21]

That the War Department denied the infantry and combat arms a fair proportion of the highest quality manpower is seemingly at odds with its vision of the modern battlefield. It would seem logical that a shrinking combat arm would require an increase in the caliber of its soldiers. In fact the War Department published a statement in early 1942 that reaffirmed the need for high quality soldiers in the combat arms:

> The increased tempo of war today, its rapid changes in local situations, and the great spaces it covers make it impossible for commanders to control the detailed action of subordinates units. Hence the accomplishment of the will of the commander depends, in final analysis, upon the ability of subordinates to make the proper decisions in unpredictable situations on the battlefield. These decisions require sound judgment and initiative, qualities which must be carefully fostered in the training of every individual.[22]

A small ground combat force comprised of the highest quality personnel might very well have fulfilled the War Department's vision. Instead, the army had to learn the same painful lesson that it did regarding the size of the infantry force. Infantry units required a quality of manpower that was at least the equal of any branch. General McNair, the commander of the AGF, stressed this point repeatedly. It was not until

General Marshall became alarmed at the condition of the combat arms in late 1943 that the army directed specific changes aimed at improving the quality of infantry personnel. The combat infantryman's badge increased pay and greater publicity were all efforts to improve the fighting spirit of infantrymen. The War Department directed that the combat arms receive a higher proportion of the highest quality recruits, particularly with regards to physical standards. The ASF and AAF strongly resisted such changes. The ASF, which ran the reception centers, was very slow to implement the directed changes.[23]

Ironically it was the tremendous requirement for infantry replacements that provided the biggest increase in the quality of the infantry force. Many of the soldiers stripped from specialty units and converted to infantrymen were from the higher quality categories. This was particularly true for the 24,000 aviation cadets and the 55,000 ASTP soldiers that the army transferred to the combat arms in 1944. Fortunately, General Marshall directed that a large majority of such personnel go directly into the ranks of the combat divisions. The tragedy was that many of these soldiers received only the most basic of infantry training prior to entering the replacement pipeline.[24]

The effects of the poor distribution of the highest quality manpower were probably greatest on the junior officer and NCO leadership of small units, for it was the potential leaders that were so often stripped from combat units. Units that deployed overseas in 1943 often did so with junior leaders who may not have represented the ideal in leadership skills. An AGF observer in Italy in 1943 reported, "Squad leaders and patrol leaders with initiative were scarce . . . The assignment of Grade V intelligence men to infantry is murder."[25] These leaders at least had the benefit of training and some experience.

Unfortunately as these leaders became casualties there was very little talent left in the ranks to fill the leadership void.

The other major actor at the strategic level of operations was the headquarters for the ETO U.S. Army (ETOUSA). General Dwight D. Eisenhower served as both the Supreme Allied Commander and as the commander of ETOUSA. Actual direction of the theater's manning system fell to the Deputy Theater Commander for Services of Supply, Lieutenant General John C.H. Lee. The leaders and staff at ETOUSA did little to correct the systemic weaknesses in the American manning system. In fact, ETOUSA did much to exacerbate the problems of quantity and quality of infantry personnel. Despite warnings from the War Department about significant shortages in infantry replacements, ETOUSA moved very slowly to establish infantry retraining programs. ETOUSA also failed to establish an independent replacement system in accordance with War Department directives. This failure contributed enormously to both quantity and quality problems within the theater replacement system. Finally, the inaccuracy of the casualty estimates of the ETOUSA staff, used to project personnel requirements, produced very undesirable results in the actual operation of the replacement system.[26]

It was no secret to the War Department in early 1944 that a serious shortage of infantry replacements was looming. From late 1943 onward, the War Department had directed all theaters to conserve manpower and begin conversion programs to produce infantry replacements. It issued a formal directive in May 1944 that required theaters to establish manpower conservation programs. ETOUSA treated this directive with little urgency and until 1945 its retraining efforts were crisis driven. The results of such

execution were less than ideal. Reacting to a crisis meant that units had to endure long delays while replacements were rounded up, trained, and then rushed to the front. Urgency meant that many converted infantrymen received only the most rudimentary instruction.[27] The U.S. Third Army Commander, Lieutenant General George S. Patton, took matters into his own hands and converted large numbers of his service troops to riflemen. He eventually converted tenpercent of his army overhead into infantry replacements, apparently with little reduction in the efficiency of services. Other commanders soon followed his example.[28]

The reason for much of the foot dragging related to a second portion of the May directive. The directive ordered the establishment of an independent theater replacement command that answered directly to the theater commander. This was in response to experiences in the Mediterranean Theater of Operations (MTO), where diversion of combat replacements into service units was rampant. In the MTO the Supply of Services (SOS), operated the replacement system. SOS base section commanders routinely diverted infantry personnel to form provisional service units. The situation was little different in the ETO. Instead of an independent replacement command, the ETO replacement system was under the supervision of the ETO SOS commander. General Lee had little motivation to provide infantry replacements from the ranks of his service force units. Infantry personnel were also diverted to meet SOS requirements in the ETO, though not to the extent of that experienced in the MTO.[29]

It was not until January 1945 that the ETO replacement system became an independent operation. Lieutenant General Ben Lear, previously the AGF Commander,

assumed command and quickly produced results. From January to May 1945 the replacement system converted almost 100,000 soldiers into combat replacements. The quality of these replacements was decidedly mixed. The natural response of any unit tasked to provide personnel was to use the opportunity to rid itself of its worst soldiers. Commanders in the combat zone were quick to note the poor quality of many of the converted riflemen. An inspection in April 1945 of the records of 514 men released by the AAF revealed a total of 231 court-martials.[30] Fortunately for American combat units, by this point in the war the German Army was facing much greater challenges providing replacements for its own hard-pressed combat units.

One major contributor to the infantry replacement shortage was the difficulty in accurately predicting personnel requirements. The ETO was not unique in failing to correctly estimate the numbers of infantrymen it would need for future operations. Both the MTO and Southwest Pacific Area (SWPA) also underestimated infantry requirements. From a simple numbers standpoint the ETO staff provided very accurate estimates for total casualties. The theater estimates for total casualties were 130 percent of actual requirements. The projected figures for June and July of 1944 were 116 percent of actual requirements. Unfortunately, planners missed widely on the percentage of casualties by branch, particularly in regards to infantry requirements. Theater planners projected infantry loss rates of approximately 65 to 70 percent. Actual rates exceeded 80 percent and at times 90 percent. Infantry losses were therefore underestimated while almost all other branches were overestimated.[31]

This produced a worst case situation in the replacement system. Production of trained soldiers in the United States was geared to the long range theater estimates and required six to eight months to react to changes. In the ETO the replacement depots became overcrowded with soldiers in specialties that were in low demand, thus creating miserable living conditions for soldiers. Converting these soldiers to infantrymen burdened the limited training resources and created morale problems among the converted soldiers. The entire situation was a very messy one for those charged with actual operation of the replacement system.[32]

Such inaccuracy was understandable given the conditions of the time. Planners only had limited historical data from the MTO and World War I to draw upon and they did not enjoy the benefit of computers to help project estimates. Given the large size of the ETO force even small inaccuracies in percentages could produce significant shortfalls or overages in personnel. The underestimation of infantry losses was most keenly felt in the first four months following the Normandy landings. ETOUSA quickly revised its personnel projections to represent a more accurate demand for infantry replacements. However, the War Department could do little to change the composition of soldiers already in the replacement channels. To quickly make up the infantry shortfall the War Department had to once again rob existing infantry divisions of trained personnel to provide individual replacements. The domino effect of such actions was to slow the overseas movement of fresh divisions. It also meant that those divisions stripped for replacements deployed overseas with a very poor training standard.[33] The ill-fated 106th

Infantry Division, which disintegrated during the German Ardennes offensive was one such division.[34]

A summary of the strategic level manning decisions does not reveal an ideal situation for the operational and tactical commanders in the ETO. War Department and ETOUSA decisions resulted in an infantry force that would go into combat with a small number of divisions suffering from a lack of high quality soldiers and sustained by a replacement system that could not provide adequate numbers of riflemen. To maintain combat operations soldiers had to be hastily trained as infantrymen and stateside divisions had to be stripped of personnel to serve as individual replacements. The influence on the morale of the converted soldiers as well as that on the soldiers pulled from their units was almost certainly negative.

The Operational Environment

At the operational level of war there were two important influences on the manning system. The first consisted of the command and control relationship between operational commanders and the theater replacement system. The second comprised the actual operation of the theater replacement system. Involved in this relationship were three types of organizations. Those organizations included the headquarters at the army group and field army levels and the Ground Forces Replacement Command (GFRC) which actually operated the ETO replacement system. The army group headquarters provided the long range estimates for replacement requirements and recommended allocation of replacements to the field armies. The field armies were the primary operational

headquarters involved in the requisitioning and distribution of replacements to the divisions. The GFRC operated the theater replacement system and additionally performed a special staff function in the ETOUSA headquarters.[35]

At the highest level of operational command and control were found the two U.S. Army group headquarters: the 12th Army Group under Lieutenant General Bradley and the 6th Army Group under Lieutenant General Jacob L. Devers. Next came the field armies, of which there were eventually five: the First, Third, Seventh, Ninth, and Fifteenth. The 28th was primarily a subordinate unit of the First Army, although it also served with the Third, Seventh, and Fifteenth Armies. The final element at the operational level was by far the most influential with regards to manning. The GFRC controlled not only replacements, but also convalescent soldiers and at any given time commanded over 200,000 personnel. By war's end, more than 2,000,000 personnel passed through the GFRC, or more than half of the theater's total strength. Operations within the GFRC determined the numbers of soldiers that arrived at combat units as well as having a significant influence on the quality of those replacements.[36]

Except for a brief period during and immediately after the D-Day landings, the army group and field army headquarters did not exercise command over any portion of the GFRC. There were limits as to what the operational commanders could do to influence the manning of their subordinate units. This is not to say that their influence was minimal, for this was far from the truth. These commanders determined the distribution of replacements to their subordinate units, controlled the rotation of divisions between combat and quiet areas, and provided valuable support to the subordinate elements of the

GFRC. As previously discussed, there were also times when these commanders took replacement matters into their own hands to produce much needed riflemen.[37]

The distribu tion of replacement personnel at the operational level was fairly straight forward. ETOUSA allocated personnel among the field armies based on the strategic situation in the theater. The army group headquarters provided the ETOUSA G-1 with personnel estimates that ranged out 60 to 90 days and recommended a distribution plan for the allocation of replacements. Prior to 14 July 1944, the First and Third Armies enjoyed the highest priority for replacements. After that date, with a few exceptions, replacements were normally divided evenly among the armies. Supporting each field army, was a replacement depot. The field army coordinated directly with this depot to control the distribution of replacements to the subordinate divisions. The corps headquarters had very little administrative responsibilities and did not participate directly in the allocation of replacement personnel.[38]

While the system of distribution was relatively simple in concept, it was not well liked by operational commanders. For much of the war General Bradley fought a losing battle to have command and control over the forward elements of the GFRC placed in the hands of his field army commanders. Commanders cited poor responsiveness, needless complications, and general mismanagement by the replacement depots as justification for their request. To further support the request, General Bradley pointed to the efficiency of replacement operations during the period of June to October 1944, when First and Third Armies exercised command and control over the forward replacement battalions of the GFRC. These battalions were generally able to fill personnel requisitions within 24 to 48

hours. Further, the battalions were stocked primarily with combat replacements and at a level that did not greatly strain the unit's holding capacity. This changed significantly when the GFRC regained control over the forward battalions. The army's postwar replacement board concluded:

> The simplicity which characterized operations under army control was replaced with delays and operational complications. Almost immediately, instead of maintaining a stockage of approximately 10,000 combat-type replacements, the 3d Replacement Depot became a depository for about 19,000 replacements, mostly SOS-type personnel, in order to ease the load on Replacement Depots in the Communications Zone . . . Throughout the remaining period of hostilities although the 3d Replacement Depot's strength averaged 15,000 it was seldom that the number of Infantry replacements available for assignment at any given time equaled 2,000.[39]

Additionally, the field army commanders were powerless to convert this large stockage of personnel into potential infantry replacements. The army also had to provide valuable transportation to move this large number of men. At one point during the German Ardennes offensive, First Army had to provide sorely needed trucks to move 11,000 service troop replacements out of the route of the German advance. These replacements were deemed incapable of operating as combat soldiers.[40]

The issue of return to duty soldiers was also a powerful motivator for commanders to seek control of the forward replacement units. This issue was a very emotional subject for both commanders and soldiers. If soldiers had to return to the fighting, they wanted to do so with their old units. Commanders certainly wanted to get these veterans back into their ranks. Such a return policy received widespread support from division, corps, and field army commanders. There was somewhat less support at the army group and ETOUSA headquarters. The GFRC was dead set against total support of such a policy

reasoning that always returning soldiers to their units created overages in some divisions while shortages existed in others. Commanders argued that an overage condition was normally very temporary condition and was an acceptable price in return for the increased efficiency and morale of soldiers. GFRC agreed to return soldiers to units whenever possible, but was not willing to agree to a total return policy.[41]

Soldiers and units often took matters into their own hands. Soldiers frequently went AWOL from replacement depots to return to their original companies, counting on support from their commanders to smooth out the disciplinary problems. Divisions often exchanged soldiers to see that they returned to their original units. Some divisions went so far as to assign an officer to the replacement depot; his mission was to massage the system to ensure that soldiers returned to their units, as well as keeping as close eye on the quality of soldiers assigned to the division. In January 1945, the GFRC finally bowed to pressure and agreed to automatically return hospitalized soldiers to their former units, even if no valid requirement existed.[42]

Despite compelling arguments, General Eisenhower denied the requests of his commanders to place the GFRC battalions under the control of the field armies. He concluded that personnel in the GFRC constituted a strategic reserve, which could be shifted to influence the outcome of operations throughout the theater. This concept was not very well thought out. Replacement personnel, while large in numbers, lacked significant combat power. They were not organized in cohesive units, did not possess heavy weapons, and except for returning veterans, lacked combat experience. From the standpoint of being able to weight the strategic main effort with replacements, there was

some validity in this argument. Simply weighting the flow of replacements did not require the GFRC to retain control over the forward battalions. The end result was a command and control arrangement that did not fully support operational requirements.[43]

While command and control of replacement operations was not to the satisfaction of the operational commanders, there still existed a fairly workable relationship between most field armies and their replacement depots. The depots had to count on the field armies to provide much in the way of logistical support, particularly transportation. The field armies had a vested interest in the depots operating as efficiently as possible. As the war progressed it also became clear that the depots needed a great deal of assistance in training replacement personnel. Almost all of the field armies developed some form of training support package to work with the depots. The Ninth Army continually rotated combat veterans to help train personnel in its supporting depot. These training teams provided a valuable boost to the confidence of soldiers soon to enter combat units, just providing an opportunity for replacements to ask questions of the veterans was beneficial. If the training teams could also provide much needed individual skills training so much the better.[44]

The rotation and rest of divisions was a major influence on the manning situation in infantry units. Control of this rotation normally rested with the field army commanders and it was certainly one of the most difficult tasks that confronted them during the war. There were simply too few divisions with which to meet their assigned missions. During the 318 days of combat in the ETO, there were six divisions that exceeded 270 days of combat and a further six divisions that exceeded 240 days. The 2d Infantry Division was

out of combat for only thirteen days in eleven months. By these standards the 28th was not a hard pressed division; it spent 196 out of a possible 267 days in combat. Many of the divisions that arrived later in the war were equally active. The 104th Infantry Division, which entered combat in late October, fought for 178 days out of a possible 196.[45]

The ideal situation was obviously to have sufficient forces on hand to periodically pull units from the line and place them in relatively safe corps or army assembly areas. Preferably, the field army or corps commander would rotate the division before it suffered excessive casualties and soldiers became completely exhausted. This would conserve a considerable portion of the division's fighting power and allow it to quickly regain maximum efficiency. During these rest periods a division would integrate new personnel and conduct individual and unit training. Ideally, replacements would form only a small portion of the unit's strength, not the large percentage so common in the ETO during the war. Major General Walter M. Robertson, commander of the U.S. 2d Infantry Division, believed that a return to the old square division organization would achieve many of these standards. Furthermore, he felt that such a change would improve the efficiency of the division's infantrymen by 30 percent.[46]

These ideal conditions seldom seemed to occur in the ETO. Rotation appeared to be based on almost complete exhaustion of a division's fighting strength. In the fall of 1944 General Marshall became concerned with the fatigue becoming so prevalent in American divisions. He offered General Eisenhower a possible solution to the rotation problem. He proposed sending infantry regiments from the stateside divisions, less much of their heavy equipment, to the ETO ahead of their divisions. The regiments could then

be used to rotate weary regiments into rest areas while they obtained valuable combat experience. Without heavy equipment these regiments could move overseas very rapidly. Eisenhower embraced the plan and several regiments moved quickly to Europe. The results were not what the two senior leaders hoped for; instead of using the regiments for rotation purposes, field army commanders all too often provided them with combat support and service support units and then assigned them a sector. This allowed veteran regiments to resume offensive operations in other areas. General Eisenhower abandoned the program by the end of 1944.[47]

Fighting in the Huertgen Forest, where the 28th and other divisions were so badly mauled, illustrates how far divisions were pushed prior to relief. The ability to push forward huge numbers of individual replacements during combat masked the true condition of the division's infantry units. The 28th received more than 4,500 officer and soldier replacements during the battle. The inaccuracy of the division's daily assessments of fighting efficiency did not help matters. As late as 6 November, when the 28th had already suffered tremendous casualties and units were disintegrating, the division still reported a combat efficiency rating of excellent to its higher headquarters. In fact, the rating never dropped below the level of good throughout the battle.[48]

Whether this inaccurate assessment reflected poor staff work or a chain of command that did not want to hear bad news is uncertain. There was definitely a perceptible accuracy gap and time lag in the information that the First Army Commander, Lieutenant General Courtney Hodges, received concerning the fighting. When General Cota requested permission to discontinue the attack and withdraw across the Kall River

Gorge, General Hodges reluctantly granted permission. He followed this approval up with a suggestion to the corps commander that General Cota be relieved of command. Sacking division commanders was a frequent occurrence in the First Army.[49]

The Third Army Commander, Lieutenant General George S. Patton, held a somewhat different view on the fighting capacity of infantry units. He believed that an infantry unit was capable of about 60 hours of fighting. Beyond that point it was too exhausted to continue. In the Huertgen Forest, even 60 hours may have been too long, but it was probably a more realistic standard for relief than one based simply on terrain objectives or friendly casualties. Prompt relief of the 28th by a fresh division after 60 hours of fighting, roughly during the afternoon of 4 November, might have altered the outcome of the fighting in the Huertgen. It would not ,however, have prevented the loss of Schmidt to the German counterattack on the early morning of 4 November.[50]

The effects of such prolonged fighting on the infantry units of the 28th will be discussed in more depth shortly. In general, however, prolonged combat was the most harmful factor in the performance of infantry divisions. Enemy resistance, the terrain, weather, and just sheer exhaustion robbed units of their combat efficiency. The more poorly trained the division, the faster the drop in performance. As efficiency dropped casualties increased, particularly among new recruits. The dwindling numbers of veterans were bound to become less and less aggressive as they saw their chances of survival diminishing with each day of combat. This was a vicious circle and even the most highly regarded divisions were not immune to the consequences. In the tough fighting for the

city of Aachen the performance of the 1st Infantry Division dropped substantially, even though it received a steady stream of replacements.[51]

One factor that led to divisions remaining so long in combat was the uneven distribution of casualties. While infantry elements absorbed the majority of casualties, the remaining 60 percent of the division functioned with little loss in casualties and efficiency. It was therefore frustrating to senior army leaders that infantry divisions did not have greater staying power in combat. Despite the failure of General Marshall's regimental rotation scheme for the ETO, the plan for the invasion of Japan included a fourth regiment for each infantry division. This fourth regiment was designed to facilitate a steady rotation of regiments, thus allowing the division to remain in combat longer. This was the solution that General Robertson recommended. Such an organization would have closely resembled the old square divisions of pre-World War II vintage. The square division was designed to conduct operations with only a portion of its combat units while the other units followed and prepared to relieve the attacking units. Critics of the fourth regiment plan argued that it would simply lead to increased frontages and more difficult missions for infantry divisions.[52]

Given the theater strategy and the limited availability of divisions, army commanders probably did the best possible job in rotating divisions. The use of quiet sectors as rest areas was a necessary gamble although the German Ardennes offensive pointed out the risk of such a policy. It is much less clear ,however, whether field army commanders rotated divisions out of combat early enough to avoid needless damage to the

infantry units. Incurring excessive casualties made it almost impossible for divisions to regain a high level of combat efficiency in the short rest periods they did receive.[53]

It stands as something of a tribute to the theater replacement system that divisions were able to remain in combat for such prolonged periods. When the 28th launched operations in the Huertgen Forest in November, it did so with a shortage of only 250 soldiers. This is rather significant since the division's total losses to that point were 8,775 soldiers.[54] When the German Ardennes offensive struck the division in December, the 28th was also close to full strength despite the heavy losses it endured in November. Few leaders ,however, would offer anything but criticism for the operation of the ETO replacement system. The soldiers who passed through the replacement system were equally critical. An article from the 10 December 1944 edition of Stars and Stripes reported:

> Most GI's remember their association with the "repple depple" as the low point in their Army life, and for good reasons. It was not at all unusual to linger in one for many months awaiting assignment. Overcrowding was the rule rather than the exception. Men were dumped together, regardless of their arm or service or their military occupational specialty and everyone took the same training.
>
> Harried cadres worked long hours trying to bring some semblance of order to these conditions. The strain made many of them irritable and the irritation was passed on to the replacement.
>
> As a result the man moving into the theater, fresh from an outfit of which he had been an integral part, became a confused and hurt animal. He resented the depot; he resented the U.S. Army.
>
> But more dangerous than this resentment was the new attitude creeping into him: he was slowly beginning to feel resentment towards the country whose uniform he wore.[55]

The "repple depple" was the soldier's slang term for a replacement depot. These depots and the other elements of the GFRC bore the brunt of criticism from soldiers and leaders alike. Leaders complained because soldiers emerged from the depot poorly trained, out of shape for the rigors of combat, and in insufficient numbers to sustain combat operations. Soldiers hated the system because they were treated in the same fashion one might treat a piece of military equipment. Facilities were grossly inadequate, there was little concern for the soldier's health and welfare, and replacements might spend long periods of boredom with little idea of what their future held. The GFRC was not the sole reason such conditions existed. The War Department, ETOUSA, and even the field armies deserve some portion of the blame for such conditions. The GFRC was only one part of this system; it was, however, the most popular target for critics. In an army that produced envy and awe for its provision of supplies and services, many considered the replacement system to be the most significant organizational failure of the war.[56]

Individual infantry replacements that reached the 28th ID in 1944 began their journey through the replacement system from a variety of starting points. Some began as new recruits in a stateside infantry training center while others were stripped from infantry units not yet deployed overseas. Soldiers returning from convalescence in a theater hospital or return to duty (RTD) replacements also passed through the ETO replacement system. As the war progressed and casualties mounted, still other starting points emerged. These included the converted infantrymen from the variety of specialty units no longer deemed necessary for operations. Disbanded tank destroyer and anti-aircraft units contributed significant numbers of soldiers, NCOs, and officers for retraining as infantry

replacements. Eventually, the army air force and the service force also contributed large numbers of soldiers.[57]

No matter where they started from, replacements destined for divisions in the ETO eventually funneled into some element of the GFRC. Organized in October 1943, the GFRC was hardly one of the most meticulously planned components of the war effort. At the time of the Normandy invasion only six of its 13 replacement depots were activated and trained in the United States. The remainder were provisional depots organized in England and equipped and manned from whatever resources the ETO headquarters could make available. Many of its personnel, to include leaders and staff officers, lacked formal training on replacement operations. There was not even an army field manual in existence on the subject. These were hardly the most ideal conditions for a unit to start from. Throughout the war these units operated shorthanded and ill-equipped.[58]

The mission of the GFRC continued to expand throughout the war. Its specified mission in late 1944 included the following:[59]

1. Reception, processing, and forwarding of trained replacements received from the United States, and the reception, processing, and forwarding of hospital returnees.

2. Retraining of general assignment personnel surplus to all commands, including the AAF, as combat replacements.

3. Retraining and reassignment of limited service personnel.

4. Processing and dispatch of ground personnel being rotated to the United States.

5. Conduct of officer retraining and officer candidate schools of all ground arms and services.

To accomplish these varied tasks the GFRC organization included depots, replacement battalions, and replacement companies. Depots took on a variety of sizes and forms based on specific mission requirements. Forward depots operated in support field armies while rear depots handled reception from the United States, retraining and conversion programs and processing of soldiers returning from hospitals. Within the forward depots there were varying number of replacement battalions, each designed to support a corps. The battalions consisted of three or more companies, each of which operated in support of a division. The total strength of a depot was approximately 2,100 soldiers, while a battalion headquarters consisted of 132 soldiers and a company of 42 soldiers. The number of battalions assigned to each depot, as well as the number of companies assigned to each battalion, varied significantly throughout the theater based primarily upon the composition of the supported field armies and corps. Each company had a designed capacity of 400 soldiers, while depots generally handled from 8,000 to 10,000 soldiers.[60]

There was very little administrative or logistical infrastructure within these replacement units. At the depot level there was one truck and one military police (MP) company, as well as finance, engineer, and laundry detachments. Companies had the bare minimum of personnel and equipment necessary to feed and house their planned transient population. Transportation, medical, and most supply services for the units came from communication's zone (COMMZ) units on an area basis. Transportation of replacements was particularly a problem, since replacement units contained only a small number of vehicles sufficient only for basic housekeeping tasks. The fast pace of operations and the

scarcity of functioning railroad lines, particularly in 1944, heightened the problem of movement.[61]

Overcrowding was by far the most significant problem that the GFRC encountered during the war. Many of the health and morale concerns that replacements raised, as well as the poor state of replacement training, were directly tied to the overcrowding of facilities. Many of the forward GFRC units routinely held twice or three times their designed capacity. Equipment authorizations in the form of tentage, mess halls, and training equipment did not meet requirements. Officially, the number of personnel assigned to operate replacement facilities was also inadequate during the war. Unofficially, the units often used replacement personnel in a semi-permanent capacity to make up for their organizational shortcomings.[62]

Such overcrowding was not justified, particularly in the forward replacement battalions. The huge numbers of service replacements pushed forward in the Fall of 1944 could have been held in depots in England or within the COMMZ. The GFRC's actions in crowding the forward battalions was one of administrative convenience, not necessity. The GFRC's ruthless determination to avoid overstrength units also contributed significantly to the overcrowding. On some occasions convalescent infantrymen, awaiting openings in their old units, remained in replacement units for an excessive duration. During periods of little activity these soldiers and other replacements could have been pushed forward and assigned to divisions as an overstrength. This temporary overstrength would have allowed units to train and assimilate replacements prior to heavy fighting. Such an arrangement worked extremely well for the assault divisions that made the initial

landings in Normandy. Each division received an overstrength of 2,500 soldiers to sustain it during the initial fighting on the continent. The airborne divisions also made frequent use of overstrengths to support their operations.[63]

Training also suffered from the overcrowding. The cadre of a depot had their hands full performing basic administrative tasks and lacked sufficient quantities of equipment such as machine guns, mines, and bazookas to train more than a small number of soldiers. Except for officers, the GFRC discouraged the use of convalescent soldiers to train replacements. In fact, the GFRC went to great lengths to keep veterans separated from new replacements. This segregation policy came from MTO experiences which found that the war stories of veterans tended to lower the morale of new soldiers. Divisions that supported training in the depots carefully screened and coached veterans prior to their contact with replacements.[64]

Overcrowding was not the only factor that influenced the training of replacements. Soldiers lost much of their physical conditioning and technical proficiency in the long period between the training centers and arrival at the unit. It normally took from two to three months for an infantry replacement to travel from the United States to his final destination. This resulted from travel time in the United States, a standard two week furlough prior to overseas movement, marshaling time at the seaport of debarkation, the actual ocean voyage, and finally movement time in the ETO. Within this period a soldier could lose many of the job skills required for his specialty.[65]

A significant problem for commanders of replacement units was the general absence of training standards or a training plan. The primary task of these units was to

move soldiers as quickly as possible though replacement channels to the combat units. Training in the depots took second priority to this task. This meant that soldiers moved in accordance with demand and the availability of transportation. No requirement existed for any unit, with the exception of retraining depots, to assess the training proficiency of soldiers and to correct deficiencies. Training occurred when time was available, not when a general lack of soldier skills demanded it. This "hip pocket" approach was certain to be of a lower standard than scheduled and prepared classes. The highest quality training therefore occurred during periods of relative inactivity. These were the occasions when most divisions could assist with training teams. When the situation heated up and replacements were likely to proceed directly into combat then the level of training diminished, just when it was needed the most. A good example occurred in October 1944, when the 28th was preparing to enter the Huertgen Forest. The division trained 250 replacements during this quiet period. In November, when the 28th was fighting in the forest, then replacements moved forward rapidly with little training. The training level of some of these soldier was so bad that commanders refused to accept them as infantry replacements.[66]

The GFRC directed its major training efforts to accomplish the conversion, or retraining mission. The GFRC eventually had a training cadre of more than 6,000 soldiers, primarily in England, dedicated to turning out combat replacements. The conversion mission for the GFRC began modestly in April 1944, but did not begin to make a serious contribution in infantrymen until early 1945. Personnel came from a variety of units to include combat, combat support, combat service support, and the army air force. Officers,

NCOs and enlisted soldiers took part in the program. A total of 113,000 soldiers successfully completed training and received assignments to infantry units. Standards did exist for completion of the conversion training and 25,000 soldiers failed to complete the program. The GFRC also operated an OCS program as well as a special course for officers who received battlefield commissions.

The quality of soldiers and officers that came out of the conversion effort was understandably mixed. Many soldiers resented being turned into what they considered nothing more than cannon fodder. They felt betrayed by an army that trained them for one skill only to discard that training to make them instant riflemen. The high casualty rate among infantry soldiers also contributed to resentment, particularly among the soldiers in the technical branches. They felt that their abilities and potential were wasted in the infantry. The quality of their infantry training, often conducted in as little as three weeks, did little to help dispel the cannon fodder image. Another contributing factor to the quality of these converted soldiers was the practice of units using the opportunity to rid themselves of poor performers. This time honored tradition was alive and well in the ETO. Approximately 22 percent of the soldiers that the AAF provided for conversion had court martial records.[67] In fairness to these soldiers, many of them proved to be among the best performers in combat. A survey of combat units in 1944 revealed that 71 percent of officers and men felt that such "black sheep" performed as good as or better than the average soldier. Another encouraging finding in the surveys was that the vast majority of reclassified soldiers, regardless of their origin, believed that the infantry was essential to winning the war.[68] [69]

One of the most widespread and probably most important criticisms of the entire replacement system was its reliance on individual, versus unit replacements. The fundamental design of the replacement system was that units would receive trained individuals rather than small units to meet personnel requirements. This was certainly the easiest and most efficient system from an administrative standpoint, since it allowed the army to exactly match replacements with requirements. If a unit requested six riflemen and one cook, it could expect to receive six riflemen and one cook. Sending soldiers forward in small units, such as rifle squads, clearly had drawbacks matching exact requirements with the proper numbers of personnel. Under a small unit system of replacement, a unit that required six riflemen might receive an entire 12 man squad, including leaders. This unit would then be overstrength, while a sister unit might be short six men, though as previously noted, an overstrength tended to be very temporary condition.[70]

Avoidance of such an overstrength, however, was a treasured principle of the overall American replacement system, the GFRC simply executed the policy. From a morale and efficiency standpoint, such a system was acceptable for service and technical units. They normally suffered very low casualties and therefore had to integrate replacements rather infrequently. Additionally, the fear or danger that soldiers in such units had to endure was of a much less obvious nature than in infantry units. These soldiers had to work together to perform tasks, but they seldom had to count on each other for their own individual safety. Even in the combat arms, some units such as artillery and armor, could function reasonably well with individual replacements. In these units

NCOs and enlisted soldiers took part in the program. A total of 113,000 soldiers successfully completed training and received assignments to infantry units. Standards did exist for completion of the conversion training and 25,000 soldiers failed to complete the program. The GFRC also operated an OCS program as well as a special course for officers who received battlefield commissions.

The quality of soldiers and officers that came out of the conversion effort was understandably mixed. Many soldiers resented being turned into what they considered nothing more than cannon fodder. They felt betrayed by an army that trained them for one skill only to discard that training to make them instant riflemen. The high casualty rate among infantry soldiers also contributed to resentment, particularly among the soldiers in the technical branches. They felt that their abilities and potential were wasted in the infantry. The quality of their infantry training, often conducted in as little as three weeks, did little to help dispel the cannon fodder image. Another contributing factor to the quality of these converted soldiers was the practice of units using the opportunity to rid themselves of poor performers. This time honored tradition was alive and well in the ETO. Approximately 22 percent of the soldiers that the AAF provided for conversion had court martial records.[67] In fairness to these soldiers, many of them proved to be among the best performers in combat. A survey of combat units in 1944 revealed that 71 percent of officers and men felt that such "black sheep" performed as good as or better than the average soldier. Another encouraging finding in the surveys was that the vast majority of reclassified soldiers, regardless of their origin, believed that the infantry was essential to winning the war.[68] [69]

there was a common bond focused on servicing and operating a piece of equipment, such as a cannon or tank. In such small crews it was difficult, if not impossible, for replacements to remain anonymous for very long.[71]

For infantry replacements this system was totally unsuited to the combat demands in the ETO. Divisions simply did not have the time to integrate an train replacements prior to them entering combat. This was the single greatest flaw in the entire system; the complete disregard for how a soldier transitioned to combat. For administrative efficiency, the U.S. Army willingly sacrificed unit cohesion and the psychological needs of individual soldiers. The intense psychological and physical stress of infantry combat is unique on the battlefield. Without the moral support that came from the other members of his squad or platoon, few soldiers could survive the stresses of combat. Brigadier General S.L.A. Marshall, in his famous work on the human dimension of combat, Men Against Fire, described this personal bond, or "personal honor" as the, "one thing valued more than life itself by the majority of men."[72] A famous quotation by Ardant du Picq also provides an eloquent description of this soldier's bond: "Four brave men, who do not know each other, will hesitate to attack a lion; four less brave men, but knowing and trusting each other, will do so resolutely."[73] To infantrymen, patriotism and national goals mattered far less than did the comradeship that existed within the unit. It was this comradeship that the U.S. Army so willingly discarded for the sake of efficiency.[74]

The value of these bonds was no secret to American leaders. Indeed, the 1941 Field Service Regulation for Operations, FM 100-5, stated:

> War places a severe test on the physical endurance and moral stamina of the individual soldier . . . Strong men, inculcated with a proper sense of duty, a conscious pride in their unit, and a feeling of mutual obligation to their comrades in the group, can dominate the demoralizing influences of battle far better than those imbued only with fear of punishment and disgrace.[75]

Major General Terry de la Mesa Allen, Commander of the 1st Infantry Division in Sicily, said it more succinctly, "men do not fight for a cause but because they do not want to let their comrades down." [76]

In Men Against Fire Marshall provides a good description of the difference in fighting power between small units and individuals. His discussion is based on the events that took place during the American withdrawal during the German Ardennes offensive:

> Individual stragglers had almost no combat value when inducted into a strange organization. The majority of them were willing to join any such solid unit which was still facing the enemy. The minority, after being given food and a little rest, took their place in line. But the moment the new unit came under enemy pressure, these individuals quit their ground and ran rearward, or sought cover somewhere behind the combat line.
>
> On the other hand, that was not true of gun crews, squad groups, or platoons which had been routed from their original ground and separated from their parent unit, but had managed in some way to hold together during the fall-back. Upon being inducted into a strange company, they tended to fight as vigorously as any element in the command which they had newly joined, and would frequently set an example of initiative and courageous action beyond what had been asked of them . . . I don't believe there is any mystery about this difference. . . . When a soldier is unknown to the men around him he has relatively little reason to fear losing the one thing that he is likely to value more highly than life-his reputation as a man among other men.[77]

While Marshall's discussion concerns stragglers, not replacements, the parallels are quite close. Indeed, Marshall criticized the American personnel system for its disregard of the importance of the bonds within small units. He was not alone in his criticism. With such a widespread understanding of the importance of small unit dynamics, it is hard to

understand why the American replacement system seemed fixated on the convenience of individual infantry replacements, versus the combat value of cohesive small units. Given the requirement to rely heavily on hastily converted soldiers and the apparent necessity to feed replacements forward to units in combat, it seemed to make perfect sense to provide infantry replacements in small, cohesive units. It is likely that the fighting power of units would have been much greater and casualties much smaller with such a system.

The army did begin to make an effort in late 1944 to keep replacements together in groups of two to four soldiers. When the soldiers departed the United States, they generally did so soldiers with whom they had trained. However, as the small groups passed from one station to another in the replacement flow, these bonds often broke down. There were simply too many beauracrats at every level in the system concerned more with simplicity of numbers than with the fighting power of units. It was not until early 1945 that the ETO instituted deliberate efforts to keep the small teams together throughout their journey forward to the tactical units. Commanders at all levels, however, had the discretion to assign soldiers based on the demands of the local situation. In fairness to the GFRC, many of its units did attempt to keep four man teams or at least two man "buddy teams" together. The tactical units, from division through company, were often just as guilty of splitting up the small teams.[78]

The GFRC was clearly the focal point for criticism of the American replacement system in the ETO. It seemed to represent all that was bad in the way America provided replacements to its combat units. The GFRC undoubtedly deserved some of this criticism. There were almost certainly replacement units that failed to have the best interest of

soldiers as a primary concern, just as there were certainly replacement units that made every possible effort to take care of their soldiers. Failure to properly anticipate personnel demands, which was a root cause for many difficulties, did not rest solely on the shoulders of the GFRC but was shared with staff sections at almost all levels of command. The greatest failure attributable to the GFRC was the tremendous overcrowding in the replacement units. This overcrowding, more than any other factor, was to blame for the poor state of replacement training, the low morale that resulted from bad living conditions, and the breakdown of primary soldier groups. Much of this overcrowding was avoidable in the ETO, certainly at the forward replacement battalion level. Greater study of the available lessons from the MTO, as well as placing control of the forward replacement battalions under the field armies, would have resulted in a much more smoothly functioning system.[79]

Strategic and operational considerations had a tremendous influence on the quantity and quality of soldiers that infantry divisions. While the GFRC certainly contributed to a drop in the morale and training of soldiers, the far greater failure was one of strategic and operational leadership. It was unreasonable in the 20th Century for leaders to treat soldiers like spare parts and then expect them to perform well in battle; soldiers of this era expected more from their army. Administrative efficiency is certainly a desirable characteristic in any organization. It should not, however, have become the driving force behind the American replacement system. The driving force should have been to provide units with well trained and motivated soldiers. Martin Van Creveld in his

book Fighting Power, summarized very clearly the flaws in the American replacement system. He concluded:

> The U.S. Army put technical and administrative efficiency at the head of its list of priorities, disregarded other considerations, and produced a system that possessed a strong tendency to turn men into nervous wrecks. Perhaps more than any other single factor, it was this system that was responsible for the weaknesses displayed by the U.S. Army during World War II.[80]

The end result for commanders at the tactical level was an infantry force too small for its mission and was supported by an ill-conceived and poorly organized replacement system. In late 1944, this meant that a division could expect little relief from combat and during this combat would have to fight with chronically understrength rifle companies. It could expect that replacements would be often be of marginal quality and after a journey through the replacement system, would also be badly demoralized. Within this framework, there were limited steps that tactical commanders could take to improve the combat efficiency of their infantry units.

The Tactical Environment

The corps and divisions that fought in the ETO recognized early the flaws of the American personnel system. Commanders of these units, beginning in North Africa in 1942, were very outspoken concerning the need for greater numbers and higher quality of infantry. They observed the effects of prolonged combat on their units and argued for greater numbers of divisions to allow for a rotation of tired units. When it came to actually changing or influencing the personnel system within their area of operations, however, there were significant limitations to what they could accomplish. This does not

mean that they were completely without options; many divisions developed sound policies to help reduce the worst effects of the personnel system.

At the tactical level, the division played the principal role in the personnel system. The corps, by design, concerned itself only minimally with the logistical and administrative requirements of its attached divisions. Divisions dealt directly with field armies for their personnel requirements, while the corps was primarily a tactical headquarters. This discussion will therefore focus on the efforts divisions made to influence the quality and quantity of replacements assigned to them.

Divisions directed their primary efforts to improve the quality and quantity of infantry replacements at two main areas. They included support of training operations in the replacement battalions and the reception and training of soldiers upon arrival in the division. While seemingly limited in scope, successful efforts in these areas had tremendous potential for improving the quality and ultimately the quantity of infantry replacements assigned to the division.[6]

The relationship between divisions and their supporting replacement battalions and companies was an important one. One which fortunately enjoyed the support of the GFRC. The GFRC policy was to establish and maintain a rather permanent relationship between each corps and a supporting replacement battalion. The GFRC went so far as to authorize the transfer of replacement battalions when a corps changed assignments from one field army to another. The divisions in turn established rather permanent relationships with specific replacement companies. Unfortunately, replacements companies did not accompany divisions when they moved between different corps and field armies. For the

28th, which served with a variety of corps and field armies, this was a significant weakness. Other divisions, however, enjoyed very successful, long term relationships with their supporting units.[82]

The primary outcome of this close relationship was to speed the flow of replacements and an improvement in their training and morale. The training and morale aspects were by far the most important and training teams quickly became a widespread practice throughout the theater. Combat veterans from divisions rotated through the replacement units to provide much needed training to new personnel. They naturally focused their efforts on infantry replacements, although many other branches might attend the training. The divisions were often able to provide training aids that the replacement units could not. Captured German weapons, mines, and booby-traps were particularly valuable training aids, as were American weapons, such as machine guns and bazookas, which were in short supply in replacement units. The most important material these training teams brought with them was information. Replacements valued the opportunity to ask questions about the fighting, particularly regarding the capabilities of German soldiers and weapons. Replacements tended to have an inordinate fear of the enemy's fighting abilities and the superiority of his weapons. The veterans had clear instructions to reduce this "myth of superiority."[83]

There were also occasions when the training support went beyond simply rotating training teams back to a replacement unit. The V Corps training program in October 1944 was one such example. During that relatively quiet period, replacements actually went down to rifle companies of the 28th and other divisions and conducted training. The

replacement battalion earmarked participating soldiers for future assignment to these companies if the situation permitted. As it turned out, the 250 soldiers who trained with the 28th were among the first replacements the division received in the Huertgen Forest fighting. Such large scale training programs were extremely rare however.[84]

It is uncertain to what degree such training programs succeeded in improving the skills and morale of replacements. That units continued such efforts until the end of the war and dedicated resources to the effort says something about how well they viewed the program. It is almost certain that these efforts at least raised the morale of the replacements, even if only to a small degree. The GFRC, in its final after action report following the war, praised such programs. This training was a poor substitute, however, for the training that a replacement should expect to receive in the squad he finally joined. Unfortunately, in far too many cases this was the only training that replacements received prior to entering combat.[85]

One of the most important steps that a division could take was to form a replacement unit within its ranks to receive and handle new soldiers. There was no provision of equipment or personnel within the division's table of organization and equipment (TO&E) to support such a unit. Many divisions, including the 28th, nevertheless found the resources to form a replacement detachment or casual company. The casual company for the 28th came into being in August and had two primary responsibilities. First was to receive, process, and then distribute replacements to the regiments and specialty units of the division. The second was to receive combat

exhaustion personnel, rehabilitate as many as possible, and return them to their units.[86] This second mission will be discussed in detail in the following chapter.

These defacto replacement companies came into existence to handle the tremendous numbers of replacements that arrived on the division's doorstep, many without adequate equipment and almost all lacking in training. The division and regimental personnel sections quickly became overwhelmed handling such large numbers of soldiers. The organization and mission of these provisional companies varied significantly among divisions. Some did little more than pick-up replacements and then deliver them to the regiments. The best such companies picked-up the soldiers, provided them with a unit orientation, made sure they had all their required equipment, and conducted training the division considered critical to survive the first few hours and days of combat. These division replacement companies, run by experienced officers and NCOs, produced such excellent results that General Eisenhower encouraged adoption by all divisions. In a March 1945 memorandum, ETOUSA urged all divisions to provide a minimum of 48 hours training to all replacements before they entered combat.[87]

The operations of the 28th's casual company fell somewhere in between the two extremes. It normally provided a basic orientation to soldiers, inventoried equipment and made up shortages, and then delivered the replacements to the regiments. It did not perform training for new soldiers. During periods of heavy fighting, such as the Siegfried Line and Huertgen battles, even these rudimentary tasks were dispensed with. The results were predictably bad for the new soldiers. It was a common story in the Huertgen that replacements became casualties before they even knew what company they were in or who

their squad leader was. First sergeants had great difficulty keeping accurate track of battle casualties because they did not know the names of their soldiers.[88]

A far better example of a division replacement reception and training program was found in the 36th Infantry Division. The 36th was one of a few divisions that would not allow replacements to join units in combat. It was the reception and training program of this division that General Eisenhower provided as an example in his March memorandum. The 36th operated a casual company and held soldiers until a minimum of 25 soldiers were present for a regiment. The regiment then assumed responsibility for the soldiers. The division required the regiments to conduct eight days of training for the soldiers. This training included physical conditioning, weapons qualification, familiarization with all weapons in an infantry company, patrolling skills, mines and booby traps, field sanitation and hygiene, and fighting in cities. Upon completion of training, the replacements joined their new units only when the unit was in a reserve location or during a period of minimal activity. The training program was a very thorough one, but it was the commitment not to rush soldiers into combat that was the most admirable characteristic of this program. There were other divisions such as the 82d and 101st Airborne Divisions and the 79th Infantry Division that refused to move replacements forward to units still in active combat.[89]

Feeding individual replacements into units engaged in heavy fighting, which occurred with regularity in the 28th, was clearly one of the worst examples of leadership in the army. This practice, despite widespread condemnation, was unfortunately all too common in the ETO. Divisions often found themselves in tactical situations where

commanders felt the only option left to influence the battle was to flood units with replacements. This normally occurred when either terrain or weather severely limited the effectiveness of artillery and tactical airpower. American divisions enjoyed an overwhelming superiority over German units in these firepower assets and used them to compensate for quantitative and qualitative weaknesses in their infantry. When conditions denied their employment or reduced their effectiveness then the infantry often floundered, sometimes with heavy losses.[90]

An excellent example of such a situation was the attack of the 28th into the Huertgen Forest. In preparing for the operation, the 28th estimated that it would face approximately 5,500 defenders, which meant that it planned for less than a two to one advantage in manpower. This was well below the standard norm of a three to one ratio for an attack on deliberate defenses. Given the difficult nature of the terrain and the previous heavy losses inflicted on the 9th Infantry Division, this force ratio was particularly optimistic. To make up the difference in combat power, the 28th received the support of a tank battalion, the better part of two tank destroyer battalions, three engineer battalions, and almost nine battalions of field artillery support. In addition, the division was to receive priority of support from air force fighter bombers.[91]

The power of these supporting assets certainly pushed the planning figures in favor of the 28th. Noticeably absent, however, was support from other divisions or the presence of a substantial infantry reserve in V Corps to support the 28th's attack. With the exception of a single battalion as his reserve, General Cota had no source of infantry with which to sustain the attack, except through the use of replacements. As the attack

progressed it became obvious that the massive support available to the division was not enough. Poor weather limited air support and, in the difficult terrain, artillery could not offset the shortage of infantrymen. The terrain also restricted the employment of tanks and tank destroyers. To make matters worse, German forces in the area were much stronger in size and quality than originally estimated. As casualties began to reach significant numbers, three options presented themselves to General Cota. He could discontinue the attack, continue to attack with diminished units, or rush forward replacements to the rifle companies. His reserve battalion was not a factor in any of the options, for Cota had committed that unit on the third day of the attack.[92]

Option one required the approval of the corps and army commander. In the Huertgen Forest, such approval by the Commander of the First Army, General Hodges, was unlikely until the division was completely spent. This point is certain; at least four other divisions in the First Army endured a fate similar to the 28th in the Huertgen. General Cota felt tremendous pressure to continue the attack, but to continue with badly shattered units against fierce resistance was virtually impossible. Thus, the only option that seemed available to General Cota was the commitment of infantry replacements to sustain the attack.[93]

From 2-7 November the division pushed forward almost 700 replacements. The total might have been even higher if the division had possessed an accurate count of total casualties. It was not until 7 November that General Cota finally realized the futility of further offensive operations and requested that the division be allowed to withdraw across

the Kall River Gorge. General Hodges grudgingly approved the request, although he directed that attacks continue in the zones of the 110th and 109th Regiments.[94]

For the next seven days the 28th continued to battle the enemy and the weather. The offensive capability of the division was virtually nil, although a steady stream of replacements kept units at something approximating full strength. For almost no purpose whatsoever, the 28th suffered an average of 352 casualties per day. Replacements flowed in at a rate of over 300 per day and included two regimental commanders, five battalion commanders, and 170 infantry officers of other ranks.[95] While the operations from 2-7 November certainly contained flaws in planning and execution, they were at least executed for a valid reason. It is hard to conceive of any reason of why the 28th was bled white during the final seven days. Only the criminal use of replacements allowed such a state to exist.

Withholding replacements until after the fighting was over and then ensuring that they received a minimum standard of training was not a common practice in the ETO. This policy was particularly rare during the last four months of 1944. During both the Siegfried Line and Huertgen Forest battles, the 28th resorted to sending replacements straight into battle without training. In both battles the employment of replacements contributed little to the combat power of the line companies and resulted in excessive casualties among replacements.[96]

In contrast, prior to the German Ardennes offensive, the 28th enjoyed a period of almost a month to train and integrate replacements into units. While it is difficult to compare one battle to another, the performance of the division's infantry during the

Ardennes fighting was clearly superior to that of earlier engagements. This was particularly true for the 112th Infantry Regiment. This regiment suffered the disgrace of two of its battalions collapsing and fleeing from battle during the Huertgen Forest fighting. During the month that preceded the Ardennes fighting, it completely rebuilt itself around a small nucleus of veterans. For its subsequent actions during the Ardennes fighting it would receive the Presidential Unit Citation. The other regiments and units of the division performed equally well during the fighting. Their performance, under such difficult conditions, demonstrated the fighting power infantry units could achieve if given an opportunity to fully integrate new soldiers into cohesive units.[97]

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CHAPTER 5

HEALTH AND MORALE OF THE RIFLEMAN

Chapter four highlighted the tremendous obstacles that a division confronted to maintain adequate numbers of skilled infantrymen. Inadequacies of the American personnel system were not the only problems a division had to face. The constant enemies of any army, disease and nonbattle injuries, still played a major role in degrading the combat power of units, despite major advances in medical capabilities. Equally costly to units was the tremendous incidence of neuropsychiatric disorders, more commonly referred to as battle fatigue, shell shock, or combat exhaustion.[1] The U.S. Army led the major combatants in the recorded incidence of this disorder.[2] Tragically, just as battle casualties hit the infantry the hardest, so too did the occurrence of cold injuries, disease, and battle fatigue. Significant numbers of riflemen were lost either permanently or for long periods from such nonbattle injuries. This additional drain of personnel presented commanders with yet another substantial obstacle to sustaining combat efficiency in infantry units.

Losses in combat efficiency to health factors were not unique to the U.S. Army. Every army suffered significant losses in combat power from these factors. Some would argue that such factors, particularly disease, affected both sides equally, thereby creating something of a zero sum loss in combat power. This rationalization surfaced quite

frequently in the U.S. Army, particularly when discussing such injuries as trenchfoot and frostbite.[3] Such an argument was far from the truth. The influence of these factors on the U.S. Army during the war was much greater than that suffered by the German Army. American units suffered significantly higher rates of personnel losses from cold injuries and battle fatigue.[4] Compounding these losses was the small size of the American infantry force in relation to its offensive mission. This chapter will analyze the influence of health and battle fatigue on infantry units from September to December 1944. The focus will center primarily on cold injuries and battle fatigue. These two medical conditions were the largest sources of nonbattle casualties among the infantry force.

Health of the Rifleman

Medical research took enormous steps forward in the years that preceded World War II. Many nations devoted considerable resources to the medical needs of its soldiers. Disease, which once claimed more lives than the enemy, was greatly reduced in World War II. Out of the U.S. Army's 234,874 total war deaths, less than 30,000 resulted from disease. Equally remarkable was the low death rate from wounds; of the almost 600,000 soldiers wounded during the war, less than 27,000 subsequently died of those injuries. Almost 400,000 of those wounded eventually returned to some form of duty in an overseas theater. Through these efforts, the medical service became a major source of combat replacements in the ETO and other theaters.[5]

As outstanding as these efforts were, infantry units still suffered tremendous losses in personnel to the combined effects of injuries and disease. The authors of the official

history of the U.S. Army Medical Department in World War II, calculated that from cold injuries[6] alone, the ETO lost the equivalent of 12 to 16 divisions of infantrymen during 1944-45.[7] The factors that caused the infantry to bear the brunt of such cold injuries, as well as most other diseases and maladies, are easy to understand. Frontline infantrymen endured the greatest hardships from exposure to cold and wet conditions from a lack warming and drying facilities, and in 1944 from a lack of adequate clothing and footgear. Infantrymen were also the most likely to suffer from nutritional deficiencies and exhaustion. Psychologically, he was exposed to the worst effects of enemy direct and indirect fires as well as the tremendous hardship of isolation on the battlefield. Consequently, more than 90 percent of cold injuries and more than 50 percent of total nonbattle casualties occurred within the infantry force.[8]

Sadly, many of these nonbattle casualties were preventable. By the time combat began in the ETO, the army already had a wealth of information available on cold injuries and frostbite. The Aleutian's Islands campaign in May 1943 and the Italian winter of 1943-44 provided valuable lessons in the prevention of cold injuries. There was also extensive experience in the MTO and the Pacific regarding the prevention and treatment of battle fatigue. There was very little exchange of information, however, and leaders and medical personnel in the ETO had to learn the lessons for themselves. Quartermasters also found themselves scrambling to provide adequate clothing and footgear to soldiers at the onset of the winter weather in 1944.[9]

Cold Injuries

Cold injuries accounted for more than 30,000 casualties in the ETO during 1944, primarily from October to December and an additional 40,000 more in the first four months of 1945. These figures represented only the soldiers hospitalized for cold injuries; untold numbers of soldiers suffered through these injuries, but did not seek or require hospitalization. Their performance in combat, however, was almost certain to suffer from such injuries. On average, hospitalized soldiers required a staggering 83 days to recover from cold injuries and approximately 55 percent of the injured soldiers would never return to combat duty.[10] Cold injuries were therefore fully as devastating to infantry units as wounds from small arms or artillery fire. The 28th Infantry Division lost the equivalent of an infantry battalion to cold injuries alone during its fight in the Huertgen Forest.[11]

Trenchfoot comprised the largest portion of these injuries, representing more than 77 percent of all cold injuries. It is not a lethal injury, but amputation or permanent disability is not uncommon. The injury occurs when feet undergo prolonged exposure to cold, wet conditions. The blood vessels in the feet contracted under such conditions, thereby reducing the flow of blood and oxygen. Numbness, followed by swelling, then intense pain, finally by tissue death were the signs of trenchfoot. Even in mild cases, soldiers were often unable to walk more than a short distance. Temperatures did not have to be abnormally low. Air temperatures as high as 50 to 60 degrees still allow trenchfoot to occur, while consistent temperatures below freezing normally result in higher rates of frostbite injuries. The environmental conditions in the ETO were extremely favorable to the development of such injuries. The winter of 1944-45 was one of the coldest and

wettest in Europe's history. Much of the terrain that soldiers operated on was also not well drained. When rains and snow came, there were significant accumulations of standing water and mud that provided an ideal environment for trenchfoot. Conditions in the Huertgen Forest were particularly conducive to this injury.[12]

The American soldier was also not well equipped with clothing and footgear for this environment. To prevent trenchfoot, a soldier has to have sufficient clothing to keep the torso of the body warm, even in the wet conditions of Europe. If his clothing is not adequate, the body will restrict blood flow to the extremities, such as the feet, to conserve warmth for the vital organs. The soldier must also have footgear that protects the feet from moisture, does not constrict blood flow, is large enough to allow for adequate insulation, and does not trap excessive amounts of moisture from perspiration. Socks must provide adequate insulation, even when wet, and should not fit so snugly that they constrict blood flow to the feet.[13]

The clothing and footgear the infantry soldier wore in 1944 was ill-suited for these requirements. His winter clothing consisted of heavy wool underwear, wool trousers and shirt, high neck sweater, the short-waisted ETO (Eisenhower) jacket, and a herringbone-tweed jacket and trousers for outerwear. General Bradley and other field commanders also ensured that the heavy woolen overcoat was made part of the soldier's issue. Footgear was to consists of shoepac boots and heavy woolen socks, or the standard combat boot with a rubber overshoe. The Office of the Quartermaster General, which gained a wealth of clothing experience in the Aleutians and Italy, recommended modifications to the proposed clothing issue. That office maintained the clothing did not

provide adequate protection against windy and cold, wet conditions prevalent in northern Europe. They urged instead, that the ETO adopt the M-1943 field jacket to replace the heavy wool overcoat and wool field trousers to replace the standard wool pants. The ETO Chief Quartermaster, Major General Robert Littlejohn, rejected the recommendations. He also rejected a recommendation to increase the requisitioned quantities of overshoes and heavy woolen socks. He based his decision primarily on the limited availability of many of these items in early 1944 and a belief that production shortfalls would keep supplies low until 1945.[14]

Experience revealed that many items of this clothing package performed poorly in the ETO. The overcoat was very heavy, bulky, and soaked up water like a sponge. Soldiers quickly passed judgment on this piece of equipment and routinely threw it away. The ETO jacket, designed to serve as a garrison as well as a field piece of clothing, arrived in the theater much too late to be issued to soldiers. The famous M-1943 field jacket, initially provided only to airborne troops in the ETO, quickly became a high demand item. ETOUSA did not requisition them, however, until January 1945 and most jackets did not arrive until late spring. Replacements, who received the jackets prior to leaving the United States, quickly found themselves besieged by veterans staking claims for the clothing upon the death of the new soldier.[15] Only the high neck wool sweater received high marks from soldiers and was generally available.[16]

The footgear situation was even worse. The standard combat boot was terrible at keeping feet dry. Its leather was not sufficiently water resistant and it leaked badly at the seams. The boots issued to soldiers were also normally much too small for winter wear.

Soldiers preferred to obtain a snug fit when fitting boots, similar to their civilian shoes. As they progressed through training their feet spread from walking and the leather shrank from wetness. When winter came there was sufficient room to wear only the thin wool or cotton socks, not the necessary heavy socks. Soldiers also tended to lace the boot too tightly, which resulted in constriction of blood vessels. Overshoes, which were worn over combat boots, were heavy, bulky, and difficult to move in. Many soldiers discarded overshoes in the same manner as the overcoat, much to their regret later. Even shoepacs, which was the best American footgear for cold, wet conditions, was far from ideal. Its canvas uppers were not waterproof, while the rubber bottoms and felt insoles caused feet to sweat profusely, they also wore out rapidly. The standard combat sock was also inadequate, being much too thin and its wool content insufficient to provide necessary insulation when wet. Heavier wool socks were generally adequate, although their wool content was also rather low.[17]

As inadequate as many of these items were, they still might have sufficed to reduce trenchfoot if they were readily available to combat soldiers. Unfortunately, the distribution of cold weather clothing was not a major success story for the ETO supply system. Many soldiers did not receive their full winter issue until late in the winter of 1944-45. There were tremendous shortages in overshoes, heavy socks, shoepacs, field jackets, long underwear, and wool trousers. At the Huertgen Forest, many soldiers in the 28th lacked long underwear, overshoes, extra socks, and water resistant clothing. Only 15 percent of soldiers possessed overshoes and almost 30 percent lacked long underwear.

Few if any soldiers possessed a water resistant outer garment comparable to the M-1943 field jacket.[18]

There were numerous reasons for such shortages. The ETOUSA quartermaster failed to properly estimate numbers of items required and did not forward winter requisitions until 15 August 1944, even at that point there was little urgency in pressing for quick delivery of critical items. The rapid progress following the breakout from the Normandy beachhead led many to believe the war was won. Concern for proper garrison clothing for an occupation army began to compete with the importance of proper field clothing for combat soldiers. In the United States, manufacturers were working hard to meet requirements, but gradually fell further and further behind. Transportation also played a significant part in the shortfall. The ETO received and processed only 29,000 tons of quartermaster supplies in August against total requirements of 55,000 tons. Lack of port facilities was the principal reason for this deficit. Once landed, there were additional losses from limited storage capacity, pilferage, and difficulty tracking various components of the clothing issue. It was a logistician's nightmare.[19]

When it was time for the supplies to move inland, there were additional transportation problems. Much of the continent's rail network was inoperative, leaving trucks as the only means to move supplies. During August, General Bradley gambled on a quick defeat of the German Army and gave food, ammunition, and gasoline the highest priority for movement. The subsequent backlog of clothing quickly outgrew what little storage capacity was available. As a result, many of the items disappeared, lost forever in isolated facilities or spirited away by black marketeers. When winter began to make itself

known in early October, the vast majority of clothing supplies still remained in the ports awaiting forward shipment.[20]

Once the supplies finally arrived at the division level, new problems surfaced. The most significant was the sizing of clothing and footgear. The army provided an insufficient number of sizes, particularly in the larger sizes. It had based its estimate of sizes on figures obtained from a study of World War I soldiers. Soldiers of World War II were significantly larger than their World War I predecessors. This limited availability of sizes accounted for as much as ten percent of the shortages in units. The problem was particularly acute in footgear, since a tight boot greatly increased the risk of injury. [21]

Soldiers and leaders also played a major role in the shortages of clothing and personal equipment. The American soldier was notorious for discarding equipment he considered unnecessary. In August and early September that included almost all of his clothing designed for winter use. Overcoats, overshoes, blankets, spare boots and even socks were items that quickly littered the French countryside. Part of this waste was a natural response to the American tradition of overloading of soldiers. Poor leadership was another factor; many leaders failed to look beyond the warm sunny day of August to the rains and snow of November. Other units quickly resigned themselves to this wastage and planned accordingly; units designated certain elements to police the routes behind the infantry. In an infantry regiment this task often fell to the anti-tank company.[22]

When the first cold rains began to fall in October the clothing situation was not good for the average infantryman. Veterans fared the worst, while new replacements still might have a few pieces of winter clothing left from their stateside issue. That this

situation occurred, given the harsh lessons learned in the Italian winter of 1943-44, is hard to understand. The U.S. Army Quartermaster Department attempted to dissuade the ETO from many of its inappropriate clothing decisions, as well as chiding the command to develop timely estimates for future requirements. That ETOUSA failed to observe such advice reflects poorly on the quartermaster's office, as well on the operational commanders. Soldiers can be forgiven for failing to anticipate the future, leaders cannot.

Far more critical than proper clothing and footgear was the value of small unit leadership. At the start of the winter in 1944, many American leaders were wholly unprepared for the scourge of trenchfoot. Much of this lack of preparedness resulted from a lack of training, while some of it was a poor sense of responsibility on the part of junior leaders. Trenchfoot was an injury that required aggressive action on the part of leaders to prevent. Under trying circumstances, soldiers often become apathetic about their personal health. Leaders must demand and enforce proper preventative measures on the part of soldiers. Some leaders lacked the necessary forcefulness or the knowledge to enforce proper standards of foot care. Two different divisions, operating in similar terrain and with similar equipment shortages could have very different rates for trenchfoot injuries, indicative of the importance of forceful and knowledgeable leaders.

The 9th Infantry Division, as an example, experienced a trenchfoot rate that was only one-third the average for the 12th Army Group. The 30th Infantry Division was another unit with an excellent record in preventing trenchfoot.[23] The record of the 28th was much less impressive. The 28th experienced a trenchfoot rate significantly higher than that of the 12th Army Group average during 1944. Most of the injuries occurred

during the two week period in the Huertgen Forest and the period following the German breakthrough in the Ardennes in the latter half of December.[24]

Trenchfoot prevention required three important actions on the part of leaders. The most important was enforcement of good foot care measures to include: frequent sock changes, daily foot massages, keeping boots laced loosely, and avoiding prolonged standing in water or snow. Good leaders found ways to get clean dry socks up to soldiers on a daily basis, normally with the morning ration run. Even if dry socks were not available, it was still beneficial for the soldier to take the sock off, wring it out and put it back on following a vigorous massage. The massage was important to open up the flow of blood to the feet. Leaders had to ensure that soldiers wore their boots loosely and that they did not try to wear too many pairs of socks. When soldiers were in foxholes, it was important that they created some form of platform to stand on so that their feet were not directly in water.[25]

Providing soldiers with access to warm and dry shelters for foot care was another action that leaders at almost all levels could take. If soldiers were able to rotate into a warming shelter for foot care even once in a 24 hour period, the incidence of trenchfoot was greatly reduced. Prevention of fatigue and provision of adequate food were also important elements in trenchfoot prevention. Tired soldiers were much less likely to take adequate precautions to preserve their health and were often less cooperative with unit leaders. Hot food and drinks were equally important tools that a leader could employ. The American infantrymen often subsisted on cold rations. Soldiers quickly lost their appetite and began to eat less and less of these rations; this led to significant weight loss

and as a result soldiers were more susceptible to fatigue and to a variety of medical ailments.[26]

Trenchfoot in the British Army occurred at a fraction of the rate of that in most American units. While the U.S. Army suffered approximately 70,000 cold injury casualties during 1944-45, the British and Canadians forces suffered only 206 cases. Differences in record keeping and a smaller number of troops explained some of the disparity in figures; the British also had fewer division combat days than their American counterparts. In the British Army, however, there was a much more aggressive approach to trenchfoot prevention. Many years of war experience, to include painful lessons from World War I, undoubtedly contributed to this attitude. The British Army stressed the active involvement of leaders in preventing trenchfoot injuries. Leaders strictly enforced sock exchanges and took great pains to see that soldiers received adequate training in prevention techniques. The British also enjoyed the advantage of a superior boot and sock combination over their American counterparts, as well as warmer, more water resistant clothing. Soldiers received hot rations regularly, along with a variety of heat sources to brew the national staple, hot tea.[27]

Probably the most significant difference between the two armies concerned rotation of troops. At the tactical level in the British Army, there was a concerted effort to rotate individual soldiers to rest and warming facilities every 24 hours and to rotate battalions after seven to ten days in the line. In the U.S. Army, as previously discussed, the effort to rotate soldiers and units was much less successful. An investigation of trenchfoot in the U.S. Army revealed that 70 percent of injuries occurred to soldiers who

had been on the line without rest for more than eight days. More than 50 percent of the cases involved soldiers who had been in the line for more than 15 days. Less than five percent of the cases occurred among soldiers who were in the line for three days or less.[28]

Frostbite occurred at a much lower rate than trenchfoot, but still had a big influence on nonbattle casualty rates. The conditions that facilitated incidence of frostbite were generally similar to those that produced trenchfoot, though temperatures had to fall below the freezing point for frostbite to occur. Soldiers who were previous cold injury victims were particularly vulnerable to frostbite. Inadequacy of clothing and footgear was a primary factor in frostbite injuries, as was the lack of adequate shelter. Poor nutrition and fatigue also played a significant role in the development of frostbite. Steps to prevent frostbite were almost identical to those related to trenchfoot prevention. Frostbite injuries were most prevalent from December 1944 to February 1945.[29]

Battle Fatigue

While cold injuries and disease were most common during the fall and winter months, the other major health problem affecting the infantry force, neuro-psychiatric disorders, was a constant scourge. More commonly referred to collectively as battle fatigue, these disorders first drew widespread attention during World War I. Their influence on American forces did not approach the level that other combatants experienced, but nonetheless created enormous problems for the army. After the war, the army had to provide long term care for more than 100,000 "shell shock" casualties. American leaders hoped to prevent a large scale recurrence of the disorder through careful

screening of potential recruits. They hoped that this screening would eliminate those personnel most likely to become psychiatric casualties in combat. To that end, the American armed forces rejected 1,686,000 recruits as emotionally unstable, or roughly one in every seven personnel. The accuracy of this screening was dubious at best and probably served only to deny the military a tremendous number of potential soldiers.[30]

It became obvious very early in the war that such screening had done little to eliminate battle fatigue as a health problem. Soldiers and marines in the Pacific, followed by soldiers in North Africa, began to experience high rates of this disorder. As the fighting moved to Italy, battle fatigue continued to be a major drain on the strength of infantry units. By 1944, the ETO experienced an official battle fatigue rate of approximately 7,700 soldiers per month.[31] A rate roughly equivalent to the infantry strength of 39 rifle companies, or almost 1.3 divisions per month.

Much like trenchfoot, this figure fails to state the full significance of the problem, for it represents only the soldiers hospitalized for battle fatigue. Unknown numbers of soldiers received treatment in regimental or division rest stations and were not represented in reported figures. Nor is it known how many soldiers never sought medical attention, but instead remained in their units contributing nothing to the unit's combat power. A 1946 AGF study estimated that for every six combat soldiers wounded during the war, one other man became a battle fatigue casualty. The army eventually discharged about 320,000 of these soldiers as psychologically unfit.[32] More than 90 percent of all battle fatigue casualties afflicted infantry soldiers. Officers and NCOs were not immune to battle fatigue and comprised a significant portion of the total number of cases.[33]

The return to duty rate for battle fatigue casualties varied significantly throughout the war, among theaters, and even among divisions. In North Africa only about 10 percent of battle fatigue cases ever returned to combat duty. Better treatment procedures by 1944 increased the percentage to 30 to 60 percent, with some units and hospitals reaching 90 percent. The goal of the 1946 AGF study was to find methods to increase the return to combat duty rate to a minimum of 60 percent. [34]

Battle fatigue proved to be a complex disorder, one that even psychiatrists had little knowledge of at the onset of the war. Current American thought on the subject is found in FM 22-9, Soldier Performance in Continuous Operations. That manual provides the following description of battle fatigue:

> Battle fatigue is a defense and escape mechanism which provides respite from intolerable situations. As battle fatigue sets in, soldiers experience anxiety, sleep disturbance, depression, and fear. They may cry easily, become irritable, and use excessive profanity. . . Battle fatigue can be brought on by sudden exposure to horrible sights, fear, and facing life and death consequences of battle. Battle fatigue can also be caused by cumulative exposure to danger, heavy responsibilities, close calls with death and disaster, and repeated grief over lost comrades. . . In later stages, exhaustion sets in. He may feel weak and too tired to move. At this point, the body may shut down.[35]

Extreme exhaustion and apathy were the most prevalent reactions that battle fatigue casualties displayed. Many of these casualties were unable to care for themselves, even to the extent of not eating or drinking. They often required the assistance of other soldiers to evacuate them to aid stations. In the most severe cases casualties were virtually catatonic and had to be evacuated on stretchers. As the war progressed the army became increasingly more tolerant of battle fatigue casualties. It even created a training

film to teach soldiers that every man had a breaking point in combat and that there was no shame when that point was reached.[36]

Leaders and soldiers had mixed feelings about such casualties. Senior leaders varied from sympathetic understanding to outright disgust. General Patton made no secret of his scorn for battle fatigue casualties, while Bradley was more sympathetic.[37] In the 28th Division, General Cota distrusted the methods of psychiatrists and believed that battle fatigue casualties were simply that, fatigued. Cota displayed a great deal of compassion and concern for these casualties. He was very disgusted, however, towards any soldier who required evacuation to a long term care facility, as well as to the doctor that ordered the evacuation.[38] Company grade officers, NCOs, and soldiers in line companies, generally expressed understanding and support for battle fatigue casualties. In a 1944 army survey, more than 70 percent of the soldiers believed that battle fatigue victims should be treated as sick men. Less than six percent believed that such soldiers should be punished for cowardice.[39]

Medical personnel soon came to find that there were two major categories of victims. The first and largest group consisted of replacements fresh into the unit. For many of these soldiers it was their first engagement. Thrust into a chaotic environment, often lacking any sense of comradeship with other soldiers in the unit, these men lacked the unit pride and personal bonds that held the veterans together. When confronted with overwhelming battlefield stress they had no emotional support within the unit and within hours or at the most, days, these soldiers collapsed. The second group consisted of the old timers that simply reached their limits of endurance. A common medical analogy of

the time likened them to a vehicle designed to run only so many miles before it broke down. The army estimated that this breaking point was in the vicinity of 210 combat days.[40]

Treatment for these soldiers took on a variety of forms during the war. The failure to rehabilitate significant numbers of battle fatigue cases in North Africa led to much experimentation. This experimentation was not simply in the hands of psychiatrists. Unit commanders and divisional medical personnel often developed superior methods for dealing with these casualties. By 1944 most realized that the further forward a soldier could be treated, the better, preferably as far forward as the battalion or regimental medical station. Keeping soldiers well forward allowed them to hold on to the personal attachment to their unit and to retain their dignity as a soldier. Doctors labeled them exhaustion cases, finding that the term psychiatric casualty tended to destroy the last remaining shreds of pride in the soldier. Many of the soldiers did come to believe that all they needed was a little rest. Doctors often helped this rest with sedatives. The unit also tried to ensure that these soldiers had a warm place to sleep and hot food. In a day or two many returned to their units with no stigma attached. [41]

For the more substantial cases, the next level of evacuation was normally a division rest camp. As was the case in the 28th Division, this camp was often the responsibility of the division casual or replacement company. This unit was an out of hide creation that normally handled both battle fatigue cases and new replacements. At this site the casualty received additional rest and hot food and was also reminded of his role as a soldier through such methods as physical conditioning and training. This was normally where the

division psychiatrist became involved with the victims. The chances of successful rehabilitation were lower here than at a regimental facility, but significant numbers still returned to their units after a few days.[42]

The further the soldier traveled from his unit, the lower the chances of successful rehabilitation. Personal pride gradually disappeared as the sounds of combat diminished. There were, however, specialized hospitals dedicated to battle fatigue cases that managed to return significant numbers of soldiers to duty. Some hospitals returned an average of 90 percent of their cases to combat duty, while the average for the theater was between 30-60 percent. Only about 10 percent of the cases required evacuation to the United States, while the remainder were assigned to a variety of noncombat duties in the theater.[43]

Medical personnel and eventually many senior leaders recognized that battle fatigue was largely a preventable injury. Many of the factors associated with sustaining good morale in units were also essential elements in preventing battle fatigue. The U.S. Army Surgeon General's Office in a December 1944 report identified several actions to help prevent battle fatigue. They included unit cohesion and pride, adequate rest and a creditable rotation policy, and special rewards for the infantryman in recognition of his vital role in the war effort.[44]

Building unit pride and cohesion was not only critical to reducing the incidence of battle fatigue but, was also one of the fundamental requirements for good morale in units. Unfortunately, the American personnel system through reliance on individual combat replacements, seriously undermined unit cohesion. The surgeon general's report recognized the importance of personal bonds in small groups in preventing battle fatigue.

It recommended that all infantry replacements be trained, deployed, and assigned together in small teams of three to nine men.[45] The GFRC and many tactical commanders were slow and inconsistent in adopting such measures. The results were large and often needless numbers of battle casualties and battle fatigue cases among replacement personnel.

The surgeon general's report also stressed the requirement for both periodic relief from combat and the establishment of a rotation policy to limit the total number of days a soldier spent in combat.[46] Establishment of a realistic rotation system for individuals or units never came to fruition in the ETO. The manpower shortage in ETOUSA almost always ruled out large scale adoption of a rotation policy.[47] The War Department did in fact establish such a policy in February 1944, but the ETO suspended execution of the policy for much of the war.[48] Soldiers and leaders expressed great frustration and outrage at the lack of such a system, particularly in light of the AAF policy that provided for crew member rotation after a certain number of missions. Many leaders and medical personnel believed that the mere existence of a rotation policy would provide a powerful incentive to soldiers. The 1946 AGF study concluded:

> It has been suggested that a rotation or tour of combat duty policy be set up to give the infantryman incentive. The counter argument has been voiced that there was insufficient manpower to implement any such policy. Specious reasoning indeed, for the purpose of the scheme is to conserve manpower. Undoubtedly some form of rotation policy would help give the infantry rifleman the "break," the ray of hope, he so desperately wants. When it is considered that in the rifle battalions the rate of attrition from all causes, with allowance for return to duty, is such that only about seven percent of the men ever attain 210 aggregate combat days, there would seem to be no logical objecting to instituting a rotation policy based on 210 combat days for the man in the rifle battalion.[49]

In December 1944, the ETO did adopt a policy that allowed for temporary duty for rehabilitation, recuperation, and recovery in the United States. The initial allocation for the program amounted to 1,350 soldiers. This later expanded to 2,200 and then to 5,500 per month. Initial priority was to soldiers that were twice wounded, decorated twice for valor, or had spent six months in frontline combat duty. In March 1945, General Bradley directed that 90 percent of soldiers selected for this duty were to come from the infantry companies and other personnel habitually associated with infantry combat. The total duration of the duty was 30 days, later raised to 45. Allowing for travel and administrative requirements, soldiers were away from the theater for up to four months. Thus, only the first two groups to depart returned to combat duty.[50]

Such temporary duty was a small, but valuable effort aimed at providing soldiers with some sense of finality or escape from combat. ETOUSA, in its final after action report, noted that the positive effects of the program were far greater than the small number of participants would indicate. Realistically, an infantry company could expect to receive only one quota per month for the temporary duty.[51] This placed great importance on the short duration, in-theater efforts to provide respite from combat. Almost all divisions formed their own rest facilities to provide soldiers with 48-72 hours of rest and recreation. Such facilities were sometimes remarkably elaborate given the limited resources available to a division. Soldiers could often obtain clean clothing, hot showers, three hot meals a day, and sleep in a warm, dry bed. If a Red Cross caravan was in the rest camp, then soldiers might have an opportunity to see a movie, play with a variety of sports equipment, or read books and magazines. If the rest camp was located in a town

that wasn't too badly damaged, there might also be civilian facilities that could provide recreational outlets.[52]

These facilities, which the 28th first established in October, provided soldiers with a much needed escape from frontline duty. There were problems, however, with the U.S. Army's reliance on providing rest for individuals and not for units. The most obvious was the loss of combat power in the already thinly held frontlines of infantry companies. Captain Charles B. MacDonald commanded a rifle company in the 2d Infantry Division during the war. In his book, Company Commander , he describes quite well the risks understrength units took to provide rest opportunities for soldiers:

> The strength of the company on the night we had moved in [the company occupied defensive positions within the Siegfried Line in September 1944] was 56 below normal. The thirteen [medical] evacuations had reduced the total to 123. Only eighty of these were in the actual forward fighting positions . . . eighty men to defend a five hundred yard front . . . Then I remembered that fourteen men and one officer must leave before dawn the next morning for 48 hours in the division rest camp . . . leaving only 68 men and two officers in the forward foxholes. The thought staggered me.[53]

The most significant disadvantage, was that while individuals were able to benefit from these rest periods, the unit as a whole remained a rather weary organization. Only a small number of soldiers could be away from the company at any given time. It would thus take weeks or even months for the entire company to receive a break from combat. Also, while soldiers were away on leave, other soldiers had to accept additional burdens of patrolling or sentry duty. In the normally understrength rifle companies these additional burdens could be quite exhausting for soldiers.[54]

This criticism should not detract from the efforts that divisions made to obtain rest and recreational opportunities for their soldiers. Given their mission requirements and

limited numbers of infantry units, the individual rest plan was probably an acceptable solution. Both the German and British Armies, however, relied on a policy of both individual leave and the frequent rotation of entire units out of the line for rest. In this manner, the entire unit could benefit from the rest and also have an opportunity to assimilate replacements, repair equipment, and conduct training. Such a rotation policy probably sacrificed combat power in the frontline positions. The fighting power of soldiers in those positions however, was likely to be much higher than an equivalent American unit which had been in the line for a prolonged period.[55]

The final area that the surgeon general's report addressed was a highly emotional topic with soldiers. It dealt with the infantryman's perception of fairness and justice. Many combat infantrymen expressed feelings of resentment directed toward soldiers in rear areas and to those who remained in the United States. Much of the resentment related to the problem of rotation and a belief that many of these soldiers were sheltered from performing their fair share of combat duty. Many infantrymen were also angry at the lack of recognition that went with their efforts. They believed that all too often, the exploits of the air force, the airborne units, and other unique organizations received the lion's share of the credit for success on the battlefield. When it appeared that their prolonged efforts had little meaning to America, then combat riflemen found it hard to justify their continued sacrifice. Infantrymen were also resentful about the distribution of clothing, rations, and morale supplies that seemed to heavily favor rear area soldiers. The surgeon general's report supported the accuracy of this perception. It concluded:

> A second measure to increase incentive [to keep fighting] is to establish more appropriate rewards for achievement. The infantryman should be officially recognized as a special type of soldier with special privledges. Reflection of his importance should be reflected in the more assiduous application of priorities on supplies and equipment, the provision of coveted articles now available primarily for base area troops . . . the infantryman is at present the least appropriately rewarded specialist in the army.[56]

Many people will find it hard to connect the importance of morale supplies to the prevention of battle fatigue. The report however, linked such rewards to the pride and self esteem of the soldier. Such items as rations, clothing, and PX supplies were visible signs to the soldier of his importance to the U.S. Army and indirectly to the American people. To receive what amounted to him as the dregs and castoffs of the supply system fostered anger, resentment, and feelings of low self esteem among many infantrymen. These feelings, coupled with the belief that an infantryman's time in combat would end only with death or wounding, robbed soldiers of much of their resolve to withstand the stress of combat.[57]

Probably the best summary of the battle fatigue problem is found in the experience of the 28th Division during the September to December period. In September, the division experienced a sharp increase in battle fatigue cases as it fought to penetrate the Siegfried Line defenses. Fatigue among the veterans and the presence of large numbers of poorly trained replacements characterized the personnel situation in the division at that time.

There was no classification of the more than 250 battle fatigue cases, but the division G-1 reported a very high occurrence among replacements. The rate dropped to near zero in October, as the division rested and integrated new personnel.[58]

In November the 28th fought its toughest fight of the war, in the depths of the Huertgen Forest. Reported battle fatigue casualties totaled more than 700 men.[59] Both veterans and replacements alike became casualties, including two veteran battalion commanders. Comments of officers and soldiers after the battle indicated a battle fatigue problem that was even larger than the official figure. Many of the cases that they observed did not get evacuated to the medical stations, instead they remained in the unit area, even in foxholes, but were of no combat use to anyone. The commander of the 2d Battalion, 112th Infantry, Lieutenant Colonel Theodore Hatzfeld, responsible for the defense of Vossenack, was one such case. He spent the battle sitting silently in the command post, while his executive officer directed operations.[60]

The factors that contributed to such a high occurrence of battle fatigue in the Huertgen were numerous. Before the unit even entered the forest, rumors of heavy casualties and fierce fighting filtered through the rifle companies. The ordeal of the 9th Infantry Division was no secret in the 28th. The forest itself invoked intense feelings of fear and isolation in soldiers. The gloominess of the forest, accentuated by constant rain and the bodies and battlefield litter of heavy fighting alone pushed many soldiers to the edge. Fatigue was also a constant presence during the battle. It was probably the single most significant factor from 7 November onward. Exhaustion cases among the replacements were commonplace as they filtered into battered, barely functional units. Physical suffering of the soldiers also contributed to the occurrence of battle fatigue. Few soldiers had adequate clothing to withstand the near freezing rains and snow. Foxholes

quickly filled with water and thick, glutinous mud characterized almost every route soldiers traveled. Hot rations rarely appeared and on numerous occasions leaders had to force soldiers to eat.[61]

Finally, there was the enemy; an enemy that hardly matched the image of an assorted collection of third class soldiers that unit leaders briefed troops to expect. Instead, this enemy seemed to be everywhere and the terrain that was so frightening to American soldiers, appeared to give the enemy almost mystical powers. Mortars were particularly devastating to the fighting spirit of the 28th's riflemen. The slightest movement, a puff of smoke, or an unshielded light quickly brought a deadly rain of mortar bombs. Veterans ranked only one other German weapon, the infamous 88mm anti-aircraft gun, higher in lethality than the mortar.[62] The weapon was so feared that soldiers often resorted to throwing their excrement from foxholes in K-Ration boxes.[63] Given the combined affect of all these factors, it is amazing that far more soldiers did not require evacuation as battle fatigue casualties.

The battle fatigue experience of the division during the German Ardennes offensive in December was far different than that of earlier battles. Exact figures for battle fatigue during the battle are not known. There was simply too much chaos and too little record-keeping taking place during that period. The testimony of leaders and the performance of units, however, indicates that battle fatigue was not a significant problem. Units continued to resist, even in small groups of two or three men, well after German forces penetrated their defenses. Almost all of the factors that were prevalent in the Huertgen Forest were also present in the Ardennes. Isolation of soldiers and units, fatigue, extremely harsh

weather conditions, thousands of replacements fighting in their first major engagement and a skilled an aggressive enemy were all present in the Ardennes. Battle casualties were very high in all of the regiments, yet the survivors fought on in determined and cohesive elements.[64]

Why battle fatigue had such a small influence in the Ardennes compared to earlier battles is hard to pinpoint. When addressing the Ardennes fighting specifically, most accounts cite leadership and the courage of soldiers as the reasons for battlefield success. The fast paced nature of the operation, with almost constant movement, also served to keep battle fatigue casualties low. Observers noted very early, that static fighting accompanied by physical hardships produced the largest numbers of battle fatigue casualties. The condition of soldiers at the start of the battle was also very different in the Ardennes. Soldiers were much better rested than during previous battles. Prior to the Ardennes offensive, the 28th enjoyed almost a month of minimal combat activity. During this time soldiers received generous rest, normally in warm, dry facilities. There were abundant recreational opportunities for soldiers and hot chow was normally served twice a day.[65] In comparison, the division's last rest period in October, was not a time of minimal activity; instead, the division incurred more than 1,000 casualties. Soldiers also slept outdoors in cold and wet conditions.[66] Most soldiers were out of the defensive line for a total of less than four days. The rest prior to the Ardennes also allowed the 28th to fully integrate replacements into units. This opportunity was not generally available in October; many replacements arrived less than a week prior to entering the Huertgen. Unlike the earlier engagements, during the Ardennes fighting the division received no appreciable

influx of replacements.[67] This eliminated the potential for large numbers of battle fatigue cases among new soldiers. It is very likely that these conditions contributed enormously to the minimal influence of battle fatigue during the German Ardennes offensive.

Battle Fatigue was a serious problem for the 28th Infantry Division and for all of its sister divisions in the ETO. Approximately 90 percent of all such casualties were riflemen and on average less 50 percent of battle fatigue cases would ever return to combat duty. The disorder was to a large extent preventable through adequate rest, proper conditioning of replacement personnel, and implementation of a rotation policy for frontline infantrymen. Unfortunately for infantry units, these conditions were difficult to achieve in the ETO. The cost was a significant and often needless loss of soldiers.

Disease

In addition to cold injuries and battle fatigue, there were numerous diseases that afflicted infantrymen, though not so exclusively. Venereal disease (VD) was a constant concern among commanders, but its effects on combat soldiers was less than that on rear area service personnel. Potentially devastating, the various forms of VD never emerged as a major threat to the combat efficiency of units. The emergence of antibiotic treatments played the major role in reducing the effects of VD. Combat soldiers also had far fewer opportunities than rear area personnel to engage in sexual activities. Respiratory diseases, such as pneumonia, were prevalent within the infantry, but never at levels significantly higher than anticipated. Occasional outbreaks of diarrhea and dysentery hit some units hard and normally resulted from use of unapproved water sources. Overall, an infantry

battalion could expect to suffer approximately 90 cases of disease that required some form of evacuation for every 1,000 total casualties. The worst characteristic of the various illnesses was their timing. The occurrence of most of these diseases, less VD, normally peaked during the winter months. This was the period of the war in which the army already had a severe shortage of infantrymen. The effects of disease coupled with trenchfoot and battle fatigue greatly worsened this shortage. American soldiers in general though, fared quite well when confronted with disease on the European battlefield[68]

Summary

Together, the effects of cold injuries, battle fatigue, and disease played havoc on the American infantry. The 28th averaged approximately one nonbattle casualty for every three battle casualties.[69] These nonbattle casualties were every bit as costly to a unit as those inflicted by rifle or artillery fire. In fact, the return to duty rate for some nonbattle injuries was worse than for battle wounds. The combined effects of these casualties in terms of lost soldier days for infantrymen was enormous, potentially as high as 16 to 18 division equivalents. To make matters worse, the peak occurrence of many of these casualties was during the winter of 1944-45. This was an additional heavy blow to an army that was already reeling from shortages in infantry.

Many of these casualties were preventable, particularly the scourge of trenchfoot. Warnings about the influence of such losses were available from Italy and personnel in the quartermaster and medical services tried to get the ETO to heed them. Unfortunately, the warnings received little notice. Many leaders and soldiers pictured the war almost won in

the late summer of 1944. Undoubtedly this contributed to the low priority given to winter clothing during the critical months of August and September; though in fairness, the limitations of port facilities and the gamble to keep pressure on the fleeing German Army played the major role in clothing shortages. The result in the early winter months, however, was an infantry force poorly equipped to deal with an abnormally cold and wet European winter.

Adequate rest for infantry divisions would almost certainly have reduced the enormous losses to nonbattle casualties. One has only to look at the variation in numbers of cold injuries between the British and U.S. Armies to determine the potential savings in manpower. The British Army, with far fewer combat days per unit and a rigid determination to keep units in the line for a short duration, experienced 206 trenchfoot cases in 1944-45. This compares to more than 70,000 for the U.S. Army. Even allowing for the smaller size of the British Army and differences in record keeping, this was a remarkable disparity. Rest was the single biggest factor in this disparity. Adequate rest and short periods of combat, however, were conditions that existed all too infrequently for American infantry divisions in the ETO.

ENDNOTES

1. The official U.S. Army term during World War II was neuro-psychiatric disorders. Medical personnel believed that use of that diagnosis should occur only in the COMMZ hospitals. It was found that soldiers labeled as neuro-psychiatric casualties had a much lower recovery rate than soldiers labeled as suffering from battle fatigue. Battle Fatigue implied to the soldier that all he needed was a little rest to recover and in many cases that was entirely correct. Shell shock was a term common in World War I and was seldom used during World War II. Battle Fatigue and battle fatigue were two of the more common World War II terms. Battle fatigue is the term used in current U.S. Army field manuals, though neuro-psychiatric disorder is still the official medical term. Battle fatigue is used throughout this thesis to allow the reader to better relate to current doctrine.

2. Martin Van Creveld, Fighting Power (Westport, CN:L Greenwood Press, 1982), 94-97.

3. Graham A. Cosmas and Albert E. Cowdrey. Medical Service In The European Theater of Operations (Center of Military History, United States Army. 1992), 494-496.

4. Ibid., 496.

5. U.S. Army, Office of the Adjutant General, "Army Battle Casualties and Nonbattle Deaths In World War II." Washington, D.C. 1946. p. 112. Document located at the Combined Arms Research Library, Archives Section, Fort Leavenworth, Kansas.

6. The medical service classified both trenchfoot and frostbite as cold injuries. The exact figures for each cannot be totally ascertained. Frostbite injuries entitled the victim to the Purple Heart, while trenchfoot did not. Many medical personnel categorized trenchfoot injuries as frostbite instead for this reason. Tom F. Whayne and Michael DeBakey, Cold Injury, Ground Type, In World War II (Washington, D.C., U.S. Government Printing Office, 1958), 189

7. Whayne and DeBakey, Cold Injuries, 499-500.

8. Ibid., pp. 499 and U.S. Army, Army Ground Forces, "Study of AGF Battle Casualties." 25 September 1946. Appendix 1, Section II. pp. 1-5. Document located at the Combined Arms Research Library, Archives Section, Fort Leavenworth, Kansas.

9. Cosmas and Cowdrey, Medical Service, 488-489.

10. Whayne and DeBakey, Cold Injuries, 67 and 499.

11. U.S. Army, Headquarters, V Corps, After Action Report for November 1944, G-1 Summary. Dated 7 December 1944. Document located at the Combined Arms Research Library, Archives Section, Fort Leavenworth, Kansas.

12. Whayne and DeBakey, Cold Injuries, 10-28, 66-68, and 127-142.

13. Ibid., 143.

14. Ibid., 143-160

15. Vncent Wolters, My Badge of Honor (New York: Vantage Press), 1985, 23.

16. Whayne and DeBakey, Cold Injuries, 143-160.

17. Ibid., 150-159.

18. U.S. Army, European Theater Historical Section. Combat Interview, 28th Division, Hurtgen Forest Campaign 1944. Interviews conducted by CPT John S. Howe. Records located at the U.S. Army Military History Institute, Carlisle Barracks, PA.

19. Whayne and DeBakey, Cold Injuries, 146-159.

20. Ibid., 148-150.

21. Ibid., 149.

22. Edward J. Drea. "Unit Reconstitution-A Historical Perspective." Combat Studies Institute, U.S. Army Command and General Staff College, 1983. p. 35. Document located at the Combined Arms Research Library, Archives Section, Fort Leavenworth, Kansas.

23. Whayne and DeBakey, Cold Injuries, 414-418.

24. U.S. Army, Headquarters, 28th Infantry Division. " After Action Reports" G-1 Summaries for October through December. Records located in the Eisenhower Library and Archives, Abilene, Kansas.

25. Whayne and DeBakey, Cold Injuries, 160-173.

26. Ibid., 173-174.

27. Ibid., 198-202.

28. Ibid., 391-392.

29. Ibid., 76.

30. Lee Kennett, GI: The American Soldiers In World War II (New York: Warner Books, 1987), 28-30.

31. U.S. Army, Headquarters 12th Army Group. "Report of Operations: Medical Section, Volume XIII," 1945, pp. 21-47. Document located at the Combined Arms Research Library, Archives Section, Fort Leavenworth, Kansas.

32. Martin Van Creveld, Fighting Power, 94-96.

33. "Study of AGF Battle Casualties." Appendix 1, Section II, 1-5.

34. Ibid., 1-5.

35. FM 22-9, Soldier Performance in Continuous Operation, 1991, 5-6 to 5-7.

36. Francis Steckel, "Morale and Men: A Study of the American Soldier in World War II, (Ph.D. diss., Temple University, 1990), 286.

37. Geoffrey Perrett, There's A War To Be Won (New York: Random House, 1991), 195.

38. William Bradford Huie. The Execution of Private Slovik (New York: Duell, Sloan, and Pearce, 1954), 162.

39. U.S. Army, Special Services Division. "Attitudes Towards Men Who "Crack" In Battle." What the Soldier Thinks. 25 April 1944, Number Five, p. 7. Document located at the Combined Arms Research Library, Fort Leavenworth, Kansas.

40. The army calculated ten combat days to be equivalent to 17 calendar days. "Study of AGF Battle Casualties," Appendix 1, Section II, 5.

41. Ibid., 1-5.

42. Cosmas and Cowdrey. Medical Service, 385-387.

43. Ibid., 385-387.

44. U.S. Army, Office of the Surgeon General, "Prevention of Loss of Manpower From Psychiatric Disorders." December 1944. Document located at the Combined Arms Research Library, Fort Leavenworth, Kansas.

45. Ibid.

46. Ibid.

47. Rotation involved replacing one soldier with another on a permanent basis. It was not the term commonly used to describe a temporary break from duty. Soldiers received a pass for durations of less than four days or a furlough for period longer. Only officers in World War II were entitled to leave, the difference being that leave could be accrued and sold each year, furloughs could not.

48. U.S. Army, Theater General Board. "Study Number Four: Leaves, Furloughs, and Passes." Dated 17 June 1945, p. 2. Document located at the Combined Arms Research Library, Fort Leavenworth, Kansas.

49. "Study of AGF Battle Casualties," Appendix 1, Section II, 1-5.

50. U.S. Army, Headquarters, 12th Army Group. "Report of Operations: Final After Action Report," G-1 Section, November 2, 1948, Volume II, pp. 19-20. Document located at the Combined Arms Research Library, Fort Leavenworth, Kansas.

51. Theater General Board. "Study Number Four: Leaves, Furloughs, and Passes," 3-4.

52. Ibid., 10-13.

53. Charles B. MacDonald. Company Commander (New York: Bantam Books, 1978), 67-74.

54. Ibid., 70-74.

55. John Ellis. The Sharp End (New York: Charles Scribner's Sons, 1980), 296-298.

56. Surgeon General, "Prevention of Los of Manpower," 6.

57. Ibid., 6-7.

58. 28th Infantry Division. "After Action Reports," G-1 Summary for October, dated 3 November 1944, 10-11.

59. 28th Infantry Division. G-1 Summary for October, dated 2 December 1944, 9-12.

60. Cecil B. Currey. Follow Me and Die: The Destruction of an American Division in World War II (New York: Stein and Day, 1984), 144-145.

61. Drea. "Unit Reconstitution-A Historical Perspective," 45-51.

62. Samuel A. Stouffer, et al. The American Soldier: Combat and Its Aftermath (Princeton, NJ: Princeton University Press, 1949), 233.

63. Combat Interviews conducted by CPT John S. Howe.

64. Robert Phillips, To Save Bastogne, 261-266.

65. Robert Miller. Division Commander: A Biography of Major General Norman D. Cota (Spartansburg, S.C., The Reprint Company, 1989), 132-134.

66. Drea. "Unit Reconstitution-A Historical Perspective," 45-51.

67. As an interesting note, the 79th Replacement Battalion fought as a unit under the control of the 109th Infantry Regiment during the Ardennes battle. It organized a defense around the city of Ettelbruck and acquitted itself well defending the city against infiltrators until ordered to withdraw on 18 December. Cited by Leonard Lerwill in The Personnel Replacement System in the United States Army. Washington D.C., Department of the Army 1954, 455-456.

68. Cosmas and Cowdrey. Medical Service, pp. 618-620 and 12th Army Group, "Report of Operations" 21-47.

69. U.S. Army, Headquarters, 12th Army Group. "Report of Operations: Final After Action Report," G-1 Section, November 2, 1948, Volume II, Inclosure 1, Annex 42. In divisions that served in North Africa, such as the 1st and 9th ID, the nonbattle casualty rate to battle casualties was often 1:1 or 1:2. The higher rate was based on the incidence of malaria in so many of its soldiers.

CHAPTER 6

CONCLUSIONS

The last four months of 1944 were easily the dark days of the war for the 28th Infantry Division. In early September its soldiers first set foot on German soil in an attempt to penetrate the Siegfried Line defenses. Four months and almost 20,000 casualties later, the 28th still found itself on the western side of the German defenses. Of the three major battles the division fought during this period, the 28th could claim only its heroic defensive stand in front of Bastogne as a battlefield success. Indeed, success in the ETO was very elusive for the entire U.S. Army amid this period. Many factors contributed to this general lack of success, but one of the most prominent was the performance of the infantry force. Chronically understrength, in many cases ill-trained, and subjected to prolonged exposure to combat conditions, the infantrymen of the 28th contributed enormously to the failure of the division on the battlefield. Their performance, which was typical of much of the infantry in the ETO, revealed significant flaws in both the structure of the U.S. Army and its systems for sustaining the fighting power of infantrymen. This thesis sought to examine those flaws concentrating on the army's efforts to man the infantry force and sustain its health and morale.

During the course of this study, it became obvious that there was one overriding problem in the infantry: a tremendous shortage of trained infantrymen who possessed the

fighting spirit necessary to defeat a skilled adversary. It also became obvious that this was not a simple problem, but was in fact, comprised of three distinct elements. The relatively small size of America's ground combat force, specifically in numbers of infantry units, was the principal reason for both poor performance and high casualties within the infantry. The U.S. Army's personnel system, particularly in its provision of infantry replacements, also contributed tremendously to the problem. Finally, the influence of health and morale considerations devastated the infantry force in the ETO, greatly worsening an already bad situation. This chapter will review briefly the critical issues from each of these three areas. It will also address the relevance of these problems to today's army and will identify possible areas for further research.

The Issue of Size

The decision to field a relatively small ground combat force of only 89 divisions was a complex one. Original estimates for the number of divisions required to defeat Germany and Japan exceeded 200 and some even considered this figure to be barely adequate.[1] American leaders realized very early in the war, however, that they could not field the largest navy, air force, and ground force in the world and still remain the arsenal of democracy. For the army this meant a balance had to be struck between the air and ground arms, as well as the service forces required to support each. This balance included not only numbers of personnel, but also manufacturing and shipping capacity. At the expense of ground combat forces American leaders elected to pursue a massive strategic bombing campaign against both Germany and Japan. They made this decision with a clear

desire to minimize the casualties entailed in a protracted land war. Only in hindsight can we see that this was an unrealistic desire.[2]

The small size of the ground combat force was to have significant consequences for the infantry. By late 1944, infantry divisions were spread thin, with forces distributed to northern Europe, Italy, and the Pacific. With only the bare minimum number of divisions available in each theater, units could expect little relief from combat. Divisions remained in combat for weeks and even months at a time. Furthermore, the area of responsibility for a division was normally so large that it could seldom rotate its subordinate units out of the line either. These prolonged periods of combat wreaked havoc on infantry companies in the ETO. Soldiers and leaders became fatigued from constant exposure to the enemy and tired soldiers were much more likely to become casualties. Prolonged combat also greatly increased the rate of nonbattle casualties. A principal element of preventing many nonbattle casualties was frequent rotation out of combat to a safe rest area. This was certainly the case when it came to combatting the devastating losses that trenchfoot and battle fatigue inflicted on infantrymen. This respite from combat was also the time that infantry units needed to integrate and train infantry replacements. Pushing replacements forward to units in combat, without benefit of an assimilation and training period, led to enormous and needless casualties.

With individual replacements pouring in, divisions could remain in combat almost indefinitely. This was exactly what General Marshall and the army intended. Individual replacements were easy to transport overseas, divisions were considerably harder to move. Fewer divisions also meant that there was a reduced requirement for headquarters and

service troops. It was this ability to sustain the personnel requirements of combat units, coupled with America's overwhelming superiority in air power, that planners counted on to offset any disadvantage in numbers. This made excellent sense in theory, but on the battlefield, however, numerous flaws to this concept emerged. Ground combat was clearly more severe, particularly for the infantry, than anyone assumed. Airpower, though a critical element in the defeat of Germany, did not break the will to fight of the German Army. During late 1944 weather constraints also limited the effectiveness of tactical airpower in support of ground divisions. The results were very heavy casualties withn the infantry, casualties that the army was not prepared to replace. Trenchfoot and battle fatigue casualties greatly worsened the infantry shortage.

What could have been done to address the inadequacy of the force structure? Certainly a greater number of divisions would have tackled the problem. It is also certain that this would have been at the expense of the air and service forces in manpower, equipment, and shipping resources. Was there a better alternative? This study concludes that a fourth regiment for each infantry division was a viable alternative. There were certainly the personnel resources to support this concept. The vast numbers of personnel converted to infantry from such branches as the tank destroyers and anti-aircraft artillery attest to this fact. Fifty infantry regiments would require approximately 200,000 soldiers. Reduced casualties, through the benefits of greater unit rotation, would have provided much of this figure. Another source of personnel were the branches, such as those above, that existed in excess of battlefield requirements. The army clearly did not need both the world's largest air force and an enormous air defense branch.

Equipment and shipping considerations also supported the fourth regiment concept. A regiment contained only 225 of the more than 1400 vehicles in a division and more than 65 percent of these were small jeep type vehicles. The regiment also contained only 24 pieces of towed anti-tank or artillery equipment. Thus, an infantry regiment represented only 16 percent of the major vehicles and equipment items in a division. For each infantry division the army could ship six infantry regiments. Even allowing for an increase in the service force of each division, the army could still ship five regiments.[3]

Once in the combat zone, these regiments would not have imposed an undue strain on the theater logistics system. A great percentage of the theater's logistical tonnage went for the movement of artillery ammunition and fuel. The additional regiments would not increase these requirements substantially, since one regiment in a division would always be out of combat. With fewer casualties and therefore less demand for replacements, the theater would not have had to support an appreciably greater number of soldiers with rations and supply items. Likewise, a smaller hospital population would significantly reduce logistical requirements, since hospitals were large consumers of resources. It is clear that the increased numbers of regiments were supportable from a shipping and logistical standpoint. Indeed, it is entirely probable that the regiments would have reduced long term requirements.

The far more significant obstacle to this concept was found within the minds of senior army officers. It was all too easy for many of these leaders to look upon the regiments as a short term increase in the combat power of divisions. This was exactly the case when General Marshall made additional regiments available to the ETO in the fall of

1944. None of these units were used to provide a rest for combat weary units. Commanders at all levels in the ETO failed to see the long term necessity to conserve infantry resources. The only option that many of them considered was for the army to increase the quantity of replacements and to speed up the buildup of divisions. They failed to realize how bare America's manpower cupboard had become and they also failed to realize that the theater could not support a rapid buildup of divisions. This wasteful mindset was totally at odds with the army's design to fight the war in Europe with a small, but high quality and well sustained force of infantry divisions.

The fourth regiment concept would not have solved all the problems that resulted from the small size of the infantry force in the ETO. Provided these units were used properly, however, they had enormous potential to improve the combat efficiency of units. The opportunity for units to assimilate and train replacements in safe areas prior to battle would almost certainly have reduced the high casualty rate among new soldiers. Frequent rotation of units would also have lessened the influence of nonbattle casualties. Most importantly, the plan was supportable within the limitations of personnel, equipment, and shipping constraints that existed in 1944. Sadly, what was lacking in 1944 was not resources, but was a committment on the part of senior leaders to sustaining the combat efficiency of their infantry units.

The Personnel Issue

From the infantry perspective, there were two significant concerns with the U.S. Army's personnel system: quality of infantry soldiers and the provision of replacements to

units in combat. Both issues seriously lowered the combat efficiency of infantry units and contributed to the high casualty figures among infantrymen. Quality of personnel problems were not unique to the infantry, they existed for almost all of the ground combat elements. These problems came about from a combination of U.S. Army policies and a poorly designed system for the classification of manpower. Failures in the provision of replacements struck the infantry a much harder blow than any other branch. Commanders and staff officers at almost every level in the army bore a portion of the blame for failures in the provision of replacements.

The army's fascination with the mechanization of warfare led it to develop a complex system for testing and classifying soldiers into categories of quality. Measurements of intelligence and civilian job skills allowed the army to best determine which soldiers it would entrust with expensive and complex equipment. This greatly benefited the technological services, the AAF and the ASF, at the expense of the ground combat forces. Unfortunately, there were no tests that could identify soldiers ideally suited for the rigors of combat. Thus many soldiers that might have made excellent rifle squad leaders or platoon leaders became instead, clerks, mechanics, carpenters, or any one of the myriad of technical specialists. The infantry was left to make do with the soldiers that remained after the technical branches took their fill.

General McNair, Commander of the AGF, recognized early in 1942 that this trend would affect the combat performance of infantry units. His pleas for a fair distribution of quality personnel fell on deaf ears until 1944, by which time it was too late to greatly influence combat in Europe. Even his logical request to implement a system to select only

physically fit soldiers for the demands of infantry combat was for the most part ignored. The War Department consistently favored the AAF and the ASF in the distribution of the best quality personnel. By 1943 the average infantryman was shorter, weighed less, had less education, and scored lowered on intelligence testing than the national average.[4]

The tough fighting in Italy in 1943 and early 1944 convinced General Marshall and the War Department that the quality of the infantry branch had to improve dramatically. The army embarked on various programs to achieve this improvement. The actions, however, quickly became overcome by the tremendous demand for infantry replacements. Units emptied their ranks of undesirable soldiers to fill quotas for infantry conversion. Additionally, the training of these converted infantrymen was so brief and rudimentary that they were often ineffective in combat. The infusion of ASTP soldiers and AAF cadets into the enlisted ranks of the infantry was a positive influence, but one that was small in size and late in coming.

While identification of quality soldiers was of prime importance to the army, there were those, including General McNair, who doubted the whole concept of intellectual measurement as a standard of quality. Studies conducted during and after the war however, established a definite link between battlefield performance, willingness to fight, and intelligence. The more intelligent, the more educated and the more mature a soldier was, the more likely he was to excel in combat. While certainly far from perfect, the army's reliance on intelligence testing was useful in predicting what types of soldiers were most likely to succeed in battle.[5] Classification of soldiers by intelligence still remains an important element of personnel assignment within the U.S. Army today.

It was understandable for decision makers in World War II to believe that the infantry could survive with lower quality soldiers. The frame of reference for most decision makers were the massed infantry formations of World War I. Few had any concept until well into the war, what modern combat would demand of the infantry soldier. During World War I there were roughly 400 soldiers in each square kilometer of the battlefield. By 1944, that figure had dropped to 36 soldiers.[6] Obviously, the lethality of modern weapons required a very high degree of dispersion on the battlefield. Such dispersion placed tremendous burdens on small unit leaders and required soldiers that could operate with little supervision and a great deal of initiative. A soldier from the lowest categories of intelligence was far less likely to meet these requirements than was a soldier from the highest categories. Lieutenant General Ben Lear, commander of the U.S. Second Army in 1942 and later a key figure in overhauling the GFRC in the ETO, commented bitterly on the problem of quality in the ground forces:

> . . . . maybe the ground arms should conduct a program of advertising of the kind used by the Navy, the Marine Corps, the Air Forces, the Signal Corps, the Ordnance Corps, etc. . . .instead of offering bait, we offer blood and sweat, and tell them of the honor of the "hard way" by which this war will be won. Once we have told them that, we can also tell them of opportunities for advancement. . . We are scratching the bottom of the barrel now for officer candidates. We are decidedly short of the right material for non-commissioned officers. We will pay for this dearly in battle. [7]

General Lear correctly identified the leadership shortcomings that would result from the lack of high quality personnel within the infantry. With such a small number of potential leaders to draw upon the army had to dip into the lower categories of personnel quality to fill leadership positions. This was certainly not the precondition that the army wanted to establish for future battlefield success of rifle platoons and squads. Combat

intensified the problem, for aggressive small unit leaders were among the most exposed and vulnerable personnel on the battlefield. Who was to take their place when they fell?

The army was well on its way to correcting the worst deficiencies regarding the classification and distribution of personnel. By the end of 1944 many of the policies that favored the technical branches were rescinded and there was much less importance placed on civilian occupational classification. In hindsight, the very best situation for the infantry would have been the elimination of intelligence testing as a classification standard. With that measurement gone it was statistically probable that the infantry would have received a distribution of personnel that matched the army average for intelligence and education. Such a distribution would have been an enormous improvement over the quality of manpower the infantry possessed in 1944.

The army's individual replacement system was a composite effort of many different participants. There were the stateside individual training centers, the processing staffs at seaports of debarkation, the GFRC, and lastly the tactical commanders in the divisions. All played an important role in determining the fighting efficiency of replacements. From all indications, the stateside facilities did their jobs reasonably well, although the production from infantry training centers never kept pace with demand. The GFRC, poorly trained and understaffed, created living conditions for replacements characterized by overcrowding and indifference to the needs of soldiers. Treated much like a spare part or a round of ammunition, the infantry replacement often lost all motivation and developed a hostile attitude toward the army that placed him into such a system.

The greatest failure of the entire system occurred when the replacement arrived at the tactical unit. Many divisions, including the 28th, threw their replacements directly into battle with little or no training and no opportunity for assimilation into the unit. All the conditions leading up to a soldier's arrival in a division were of small importance compared to the replacement's first days in combat. If he entered combat as a member of a cohesive organization, then his chances for survival rose dramatically. If he entered the fight as a stranger, without the benefits of moral support from his comrades, then he was very likely to become a casualty. The almost continuous nature of combat made this process of integration extremely tough. Many commanders took the easy way out and blamed the system for providing them with a poor quality and insufficient quantity of replacements. These were often the same commanders that committed replacements to battle with no training whatsoever. Other commanders, possessing greater vision and knowledge of the human element, steadfastly refused to put replacements into battle before they received at least a minimal opportunity for training and assimilation. In these units, the sacrifice in short term combat strength was definitely offset by the greater long term combat efficiency of replacements. While policies such as these were worthy of emulation, they still fell short of the ideal condition for receiving replacements. Only a greater number of infantry units and an effective unit rotation plan could ensure that replacements were fully integrated and trained before battle.

Health and Morale

The U.S. Army devoted enormous resources to the health of its soldiers during World War II. In personnel alone, the army committed almost 700,000 soldiers to the medical service.[8] The return on this investment was substantial. The influence of disease, while still very much a factor in soldier performance, was considerably lessened from previous wars. Likewise, the survival rate for wounded soldiers, thanks to the large scale use of antibiotics, increased enormously. The medical service returned to duty almost 400,000 soldiers, or a phenomenal 65 percent of all soldiers wounded in action.[9] Such a high level of medical care contributed greatly to the morale of the infantryman and returned to units the valuable experience and skills of combat veterans.

There were medical conditions, however, that medical personnel could treat, but could not prevent. Prevention of cold injuries and battle fatigue rested squarely on the shoulders of leaders. Through a combination of factors, chief among them poor leadership, these two medical conditions ravaged the ranks of infantry units in the ETO. More than 90 percent of these nonbattle casualties occurred among infantrymen and the effects were staggering. Far less than 50 percent of infantrymen evacuated for a cold injury or battle fatigue ever returned to combat duty. For those that did, it often followed a recovery period of many months. The official history of medical service operations in the ETO estimated that during the winter of 1944-45, the equivalent of 16 divisions of infantrymen were lost to trenchfoot and frostbite alone. Battle fatigue contributed to the loss of at least one additional division per month.[10]

There was ample warning for the leadership of the ETO concerning the dramatic influence cold injuries and battle fatigue could have on the fighting power of units. Combat in North Africa, Italy, and the Aleutian Islands in 1943 and early 1944 showed just how devastating these medical conditions could be. To their credit, both the medical service and the U.S. Army Quartermaster General reacted quickly to improve inadequate equipment and to provide a warning for leaders. Tragically, the lessons learned in these other theaters failed to impress leaders in the ETO. Initial training of leaders and soldiers in the prevention of cold injuries was inadequate, while theater logisticians mismanaged the provision of cold weather clothing and footgear. The logistical difficulties caused by inadequate port facilities further complicated the supply of clothing to soldiers, as did the low priority that clothing received in the fall of 1944. In his autobiography, A Soldier's Story, General Bradley conceded that he took a risk with clothing:

> When the rains first came in November with a blast of wintry cold, our troops were ill-prepared for wintertime campaigning. This was traceable in part to the September crisis in supply for during our race to the Rhine, I had deliberately by-passed shipments of winter clothing in favor of ammunition and gasoline. As a consequence, we now found ourselves caught short, particularly in bad weather footwear. We had gambled in our choice and now were paying for the bad guess.[11]

In fairness to Bradley, he made the gamble on supplies when the enemy situation seemed to suggest it was possible to end the war prior to the onset of winter. The supply of clothing was also only one element of prevention, leadership was by far the most important factor. There was clearly a breakdown of leadership at many levels of command, but the failure at company and battalion level was particularly evident. Prevention of cold injuries requires dynamic and often forceful leadership to ensure that

soldiers change socks and massage their feet frequently. Even good leaders, however, were not immune to the fatigue and apathy that sets in when a unit is too long in combat. Senior leaders were guilty of failing to provide the opportunities for rest necessary to prevent this malaise. The British Army did so and suffered less than one percent of the total cold injuries of the U.S. Army.[12]

The rate of battle fatigue rose and fell throughout the war, but was generally worse during difficult defensive operations. Battle fatigue was far more of a problem for the 28th during the last week of the Huertgen Forest battle than it was during the initial stages of the attack. There was little that medical personnel could do to prevent such casualties, but they did manage to vastly improve treatment procedures. Less than ten percent of battle fatigue casualties returned to duty in the North African campaign. In the ETO the rate reached almost 50 percent. Beyond education of leaders however, the medical service was powerless to reduce the occurrence of new casualties. That was clearly a leadership responsibility.[13]

Prevention and reduction of battle fatigue casualties required two different strategies. The creation of a viable rotation policy and periodic opportunities for rest were the keys to reducing the incidence among veterans. Fully integrating replacement personnel prior to battle was critical to reducing the incidence among new soldiers. Increasing the morale in units was also a vital element in reducing the influence of battle fatigue. The incidence of battle fatigue among units with high morale was minimal. Achieving and sustaining morale was a complex task for infantry leaders. A sense of teamwork, confidence in unit leadership, and a clear understanding of the unit mission were essential elements to high unit morale. All were difficult to achieve in the constant

turnover of leaders and soldiers. It is all too easy to forget that losses of experienced leaders met or exceeded those of soldiers.[14]

The army did little to help infantry leaders build high morale in units. The army relied almost exclusively on material goods and services to keep morale high. Such symbols of concern for the soldiers' welfare did little for morale if soldiers perceived that there was unfairness in their distribution. All too often, infantrymen believed that rear area soldiers were awash in relative luxury, while they lacked for even adequate cold weather clothing. With such beliefs it was easy for infantrymen to become resentful about the small value the army placed on their sacrifices. Resentful soldiers were not likely to possess a high degree of morale. Resentment was certainly not a strong moral support to help soldiers withstand the stress of combat.

Implications and Questions

The U.S. Army and its infantry force have gone through enormous change since the end of World War II, yet many of the problems that plagued the 28th Infantry Division in that war refuse to die. Both the Korean and Vietnam Wars raised concerns about the performance of American infantry units and of the quality of personnel assigned to those units. The demands on today's infantryman continue to grow. This is true not only because of the increasingly sophisticated technology present in infantry units, but also because of the complex nature of military operations. Operations in areas such as Somalia require soldiers and leaders with discipline, initiative, judgement, and a broad

understanding of the role of their unit and the U.S. Army play in the military effort. These requirements certainly seem to argue for an infantry force comprised of high quality personnel.

Where will those future soldiers come from? Already the military is beginning to struggle to maintain the quality force that won the Persian Gulf War. There are concerns that the declining health of the American education system will lead to lower quality recruits in future years. If this is indeed, an accurate prediction, what actions must the army take to ensure that there is an equitable distribution of quality personnel? High quality recruits remain a precious resource and every service, as well as every branch in the army, have legitimate demands for those resources.

This thesis did not consider the influence that the creation of elite forces had on the infantry force in World War II. The criticism that such forces siphoned off too much high quality manpower from the conventional divisions undoubtedly had some measure of truth. However, a detailed examination of these units and their possible influences was outside the scope of this paper. That same question may need to be raised again in today's army. The special operations force (SOF) structure, once part of an 800,000 man army, must now exist within a much smaller organization. With no downsizing of SOF, what are the implications for soldier quality in conventional infantry units?

There are also issues of concern that continue to exist with the army's reliance on an individual replacement system. During student staff group exercises at the U.S. Army Command and General Staff College (USACGSC), replacement operations form a portion of the tactical decision making process. A common answer for distribution of incoming replacement personnel is to push them forward immediately to subordinate elements in

combat. Such an answer shows either enormous confidence in today's soldiers or a failure to appreciate the hardships that such a policy would create for replacements. This certainly raises the question of whether today's leaders receive adequate training in replacement operations. We should also consider whether leaders at all levels clearly understand the potential influence of nonbattle losses on the combat performance of their units. Without adequate training, it is all too easy for leaders to divorce themselves from health issues and rely strictly on medical personnel to recognize, treat, and prevent nonbattle casualties. The results of such a misconception could be disastrous to units.

Additional Areas For Study

World War II remains the largest military endeavor in America's history. As such, it forms an enormous portion of our institutional knowledge concerning mobilization and the conduct of theater level operations. As long as the U.S. Army must maintain the capability for massive mobilization, then World War II will continue to provide a wealth of knowledge. This study, of necessity, examined only a very small portion of a very complex subject. Much remains to be studied about the human element in combat.

The focus of this thesis was primarily on infantrymen in general and the special problems of leader replacements received little attention. Additional study in this area might contribute significantly to the selection and training of today's junior leaders. An examination of methods to better screen and select infantry personnel at the reception station level might also be of benefit to the army. In light of today's increasing reliance on computer simulations, it will also be important to study how the human dimension can be

factored into the battlefield simulation. At present, morale and unit cohesion remain constant throughout these exercises. It is critical to future battlefield success that the effects of fear, fatigue, and low morale be better represented in these simulations.

The regimental rotation system was also an intriguing concept that bears additional study. In today's army, task organization changes are an accepted fact of life, though generally on a temporary basis. Does there need to exist some mechanism that would allow divisions to routinely alter their unit configuration on a more long term basis? What type and size of units would a division need to be able to rotate? Such a study may also examine the current "round-up" concept that aligns a reserve component brigade with an active duty division. This provides the division with four ground maneuver brigades instead of the normal three. Does this provide the division with a capability for prolonged operations or is it simply viewed as an increase in combat power? *Is this a concept that* should be extended to all active duty divisions?

Perhaps the most significant area for further study concerns the integration of new technologies into the army. In 1941-42 the army struggled to understand all the implications of mechanization and airpower for modern warfare. Within that struggle, they lost sight of the importance of the fighting spirit of the individual soldier. Does our army of today face a comparable struggle with an information revolution on the battlefield? Studies that examine the human dimension of technological change will be of immense importance to the army. During this period of rapid change, it will be critical for leaders to fully understand the imply This study revealed a pattern of organizational failures within the army that were in some part a result of the rapid advance in

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weakened this spirit. Many of these failures were a direct result of the rapid advance of technology immediately prior to and during the war. The value of the individual soldier was quickly lost among leaders over enamored with this technology. The army of the 1990's, in the age of hand-held computers, satellites, and data links is very comparable to the army of the 1940's. How does the army rapidly integrate these phenomenal advancements in technology while still sustaining the fighting spirit of the rifleman. Failure to find a solution to this challenge might some day lead to an army rich in technology, but lacking in the moral core that will always be the essential element on the battlefield.

Endnotes

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