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Logistics and Patton's Third Army
Lessons for Today's Logisticians

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Preface

When conducting serious study of any operational campaign during World War II, the military student quickly realizes the central role logistics played in the overall war effort. Studying the operations of General George S. Patton and his Third United States Army during 1944-45 provides all members of the profession of arms—especially the joint logistician—valuable lessons in the art and science of logistics during hostilities. Future conflicts will not provide a two or three year "trial and error" logistics learning curve; rather, the existing sustainment infrastructure and its accompanying logisticians are what America's armed forces will depend on when the fighting begins.

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Abstract

George S. Patton and his Third Army waged a significant combined arms campaign on the Western Front during 1944-45. Both his military leadership and logistics acumen proved decisive against enemy forces from North Africa to the Rhine River. This paper illustrates Patton's logistical experience before assuming command of the Third Army in 1944, examines how logistics successfully contributed to Third Army's 1944-45 campaigns, and suggests appropriate lessons for today's joint logistician. The research findings summarize Patton's career and his exposure to the importance logistics plays in modern war. Next is an analysis exploring how logistics influenced Patton's campaigns in North Africa, Sicily, France, and Germany; including examples of Patton's troops continually adapting logistically during these campaigns. The discussion concludes with suggested lessons learned for today's joint logistician.

Though almost sixty years have elapsed since Patton's Third Army raced across the French countryside and into Germany, this incredible feat of combined arms still offers fresh insights for today's warriors, and especially for the joint logistician. Patton may have been "hell on wheels," but his Third Army's accomplishments depended upon the agile combat support provided by his quartermasters and other logisticians scattered throughout the European Theater of Operations.

This essay discusses Patton's previous logistical experience before assuming command of the Third Army in 1944, examines how logistics successfully contributed to Third Army's 1944-45 campaigns, and suggests appropriate lessons for today's joint logistician.

Mexico and World War I

After graduating from West Point in 1909, Patton began his army career with K Troop, 15th Cavalry Regiment at Fort Sheridan, Illinois. Patton eagerly jumped into his new assignment, and also spent a great deal of time studying Clausewitz and other military texts establishing a pattern that continued throughout his life. His professional studies during his early career focused on the operational level of war—"the movement, support, and sequential employment of large military formations in military campaigns."[1] After passing the promotion exam to First Lieutenant in early 1916, Patton's reassignment to the 8th Cavalry at Fort Bliss, Texas moved him closer to the simmering American-Mexican border. After Pancho Villa's raid on Columbus, New Mexico, Brigadier General John J. Pershing assembled a retaliatory force to find Villa. When Patton discovered his unit would not be part of the expedition, he asked to be assigned as an aide to Pershing. Leaving Fort Bliss together on 13 March 1916, Patton and Pershing began a close and lifelong friendship. Also, Patton would experience the first phases of the growing technological revolution on the twentieth century battlefield.

As a participant in the Mexican Punitive Expedition of 1916, Patton witnessed the beginnings of Army motorization in the combat arms and quartermaster corps. While purchasing food from local farmers, Patton discovered a Villista compound. Without hesitation, he used his three assigned automobiles and 14 accompanying personnel to attack and secure the stronghold. This motorized engagement, a first in U. S. Army history "foreshadowed Patton's later expertise in this kind of combat."[2] In addition, the use of internal combustion engine vehicles in delivering supplies would enhance an army's ability in future conflicts. Major John F. Madden the Quartermaster General for the punitive expedition, commented:

> It can be asserted with conviction as a result of observation of motor transport operating with this Expedition, that this method of forwarding supplies is eminently practicable and comparatively inexpensive under ordinary normal conditions, that it is dependable enough to be worthy of adoption for general use and it would be the policy of wisdom to continue and expand the motor units now in service, to perfect their organization and training, from now on so that when again the Army is called on for service akin to this expedition, it will have ready and at maximum effectiveness, this modern and proven aid to its efficiency.[3]

Though Major Madden constantly struggled with vehicles designed for civilian use, poor roads, and parts shortages, he enthusiastically supported incorporating trucks as a means of delivering supplies to forward deployed elements. Patton biographer Martin Blumenson describes Patton's exposure to both technology and the central role of logistics during his first operational campaign: "He had become acquainted with the primitive motor vehicles used by the U. S. Army and employed them for the first time in extended operations and become aware of the importance of logistics as he studied the supply system."[4] After completing the Punitive Expedition, Patton's superior, the newly promoted Major General Pershing, left for France to assemble and train the

American Expeditionary Force (AEF). Patton also accompanied his lifelong idol to the war-torn European continent.

Upon arrival in France, the AEF faced enthusiastic crowds but a logistical nightmare. Another of Pershing's staff officers, Major George C. Marshall, observed conditions rivaling those facing "Washington's forces at Valley Forge in the fall of 1917…seen soldiers of the First Division without shoes and with their feet wrapped in gunny-sacks, marching ten or fifteen kilometers through the ice and snow…seen so many horses of the First Division drop dead on the field from starvation."[5] After assuming directorship of the Tank School at Bourg, France, Patton faced similar logistical circumstances but expertly tackled issues such as "requisitioning land, constructing buildings and tank training areas…requisitioning supplies and spare parts for a tank battalion (calculated down to a mechanic's need for replacement nuts and bolts), and employing the machines in combat once they had been transported by rail to the appropriate sector of the front."[6] Even his course of instruction "provided the skills needed to assure that his tank units would mesh with the activities of infantrymen, artillerymen, signalers, airmen, and **logisticians** (*emphasis added*)."[7] After training enough troops and obtaining equipment sufficient to outfit a brigade, Patton and his tankers faced their first combat test: the September 1918 Meuse-Argonne Offensive.

Patton and his 345 tanks fought valiantly during this critical battle. After 14 days, the brigade had exhausted its tank complement and out of 834 troops, only 80 were available to fight—even Patton required hospitalization due to a wound. However, this combat test had allowed Patton to hone doctrine, while self-critiquing his leadership and logistical abilities. Upon his return after convalescence, he authored notes on "Entraining and Detraining at Night" followed by "Practical Training, Tank Platoon."[8] These two papers emphasized Patton's commitment to both logistical matters and combat preparation. His brief but intense experiences during World War I prepared him for bigger challenges, but he would have to wait over 20 years before again leading and sustaining troops on the battlefield.

"Arsenal of Democracy"

As Patton itched for a field command in late 1939, the American army under its new Chief of Staff General George C. Marshall was building a credible military force after the neglect of the 1920's and 1930's. Marshall's exposure to the haphazard buildup of forces during the First World War and the difficulties presented by training and employing troops without the required logistics greatly shaped his efforts prior to America's entry into World War II. Marshall also encountered a mindset throughout the Army in which "logistics was held in low esteem."[9] This outlook would change during the Second World War as the greatest contribution made by the United States to the Allied effort would be "in weight of materiel rather than in weight of manpower."[10]

The "Arsenal of Democracy" eloquently described America's materiel contributions but underestimated the challenges to delivering sustenance to forces fighting the Axis powers. First America's dormant industrial power required a great deal of time to "ramp up" to support both Allied and American logistical requirements. During an address in 1938, General Marshall told the Army Industrial College, "No matter how many billions of dollars Congress places at our

disposal on the day war is declared, they will not buy ten cents worth of materiel for delivery under twelve months, and a great deal of it requires a year and a half to manufacture."[11] Secondly, tenuous sea lines of communications (LOC) across the Atlantic and then Pacific oceans plus the requirement to plan, manufacture, assemble, and deliver all manner of materiel taxed Army planners and logisticians. Marshall viewed America's army as one of battalions spread amongst 130 posts without significant service forces. Training of large unit formations was lacking, and "…neither the Regular Army nor the National Guard had any tactical corps or field army headquarters."[12] Finally, the United States would fight as a part of a worldwide coalition, providing significant quantities of war materiel to each partner. Many of the logistics decisions made at the strategic, operational and sometimes tactical level would be influenced by coalition, rather than solely U. S. considerations. Even at the first staff discussions between American and British representatives in late January 1941, "logistics provided the frame within which the first great strategic decision was made."[13] Known as ABC-1 (United States Plan Rainbow-5), proposed a "Germany first" strategy if America entered the war. Even with its burgeoning materiel might, America "could not have mustered sufficient effort to deal with both major enemies simultaneously."[14] For Marshall it was now time to mold and support the armies of a democracy and find men to lead them—men such as George S. Patton.

Pre-War Maneuvers and the Desert Training Center

When Germany invaded Poland in September 1939, Patton was in command of Fort Meyer, Virginia. This was a largely ceremonial and socially demanding posting and Patton yearned to get any field command as he saw war approaching. He and others observed the mechanization of the battlefield and the Wehrmacht's superb efficiency in incorporating tanks, aircraft, and "panzer grenadiers" (mechanized infantry) into one destructive sledgehammer against enemy forces. Experienced American personnel with a similar background were few, and formations larger than a battalion were virtually nonexistent. Marshall hurriedly determined the need for an armored force and authorized a corps with two armored divisions. These "saplings" would in time lead an American Army schooled in the methods of "blitzkrieg" style of warfare, and in temporary command of the Second Armored Division was Brigadier General (S) Patton.

Patton zealously executed his duties and projected an aura of youthfulness even though he was nearly 55 years old. Leading and training a newly formed armored division mirrored budding American concepts of fighting the impending war in Europe. Marshall and other prewar planners determined that mobile formations—abundantly equipped, rapidly resupplied, and heavily supported by air and naval power—would defeat the Nazi legions. U.S. Army planners devised a logistical strategy in which "the emphasis upon weight and quantity of materiel, sometimes at the expense of qualitative superiority over the enemy radiated through every aspect of the Army's logistics. It was reflected above all, perhaps, in a supply system that accepted and greatly extended the modern mass army's dependence on continuous resupply."[15] With this basic guidance, Patton and others began the task of building up America's armored forces, but faced immediate logistical hurdles due to the expanding war in Europe.

As in past wars, initial American manpower requirements were met first and the follow-on materiel needs languished or were redirected toward more pressing emergencies. The newly

created armored divisions quickly filled out with new draftees (compliments of the September 1940 Selective Service Act) but with an "authorization of 6,486 vehicles to attain full combat strength, the Armored Force inherited less than 1,000."[16] Even after ten months of extensive training and expanded production, War Plans Division Chief, Brigadier General Leonard T. Gerow reported to General Marshall "the First Division (reinforced) is the only division we have which even approximates readiness for combat service involving a landing on a hostile shore."[17] Combined with a robust naval shipbuilding program, American factories were producing vast quantities of aircraft, mortars, certain types of antiaircraft artillery and machine guns, rifles, field artillery ammunition, light tanks, and trucks. Unfortunately, Army brass saw much of this new materiel allocated to Great Britain and the Soviet Union. Patton and other division commanders addressed these discrepancies with typical Yankee ingenuity. Using trucks as tanks, pine logs as machine guns, or flour sacks as air delivered munitions, the rapidly growing American army pressed ahead with the US Army GHQ maneuvers for 1941.

The 1941 maneuvers provided Patton and his Second Armored Division an opportunity to showcase the capabilities of mechanized warfare and hone the "nuts and bolts" of logistics and movement. Fortuitously, Patton's division was assigned to the Third Army and his troopers ran roughshod through the opposing forces. During the smaller scale Tennessee games held in June, "Patton's forces knifed through the defenders with such speed that the umpires stopped the action after nine hours instead of the allocated two days."[18] Patton also pointed out to Secretary of War Stimson that his division covered "in some cases over 110 miles, every fighting vehicle in the division, except two tanks and a scout car, got to the place it was supposed to be in time to deliver the attack."[19]

The Louisiana maneuvers in which over 350,000 men participated, were the largest peacetime exercise in the history of the US Army. Beginning on 15 September 1941, the exercises progressed on a two-phase agenda. Evaluating mobility in the attack and the defensive capability of smaller forces, Patton's Second Armored met overwhelming infantry and antitank opposition during the first phase and was essentially destroyed. During Phase II his forces executed a "wide hooking movement that covered some 200 miles in 48 hours…despite the fact they were overextended logistically…"[20] Operating from a 300-mile supply line, Patton kept his mechanized forces fueled by purchasing gasoline from commercial dealers and service stations. Besides testing further the impact of mechanization and defensive doctrine, the Louisiana maneuvers provided invaluable logistics instruction as well. Patton procuring gas on the march exposed the criticality of a flexible and responsive Communications Zones (COMZ). General Marshall also recognized the importance of COMZs, demanding each army reposition its COMZ between the first and second phases of the maneuvers. He recalled in later years:

> Eisenhower for example, was chief of staff of General Krueger's [Third] Army in the South. All of them learned a great deal…I directed that they change their bases on each side. They told me it would take a month for something like that and be very, very expensive. Well, I said, they would have to do it anyway. They would have to do it in Europe, and they would have to do it here…I remember in one case it took ten days, and cost 40,000 dollars…but it was a very economical sum when it came to the efficiency it developed in the troops. That is the reason

> that Patton and Hodges and Bradley were able to move as rapidly as they did across the face of Europe.[21]

The mock combatants concluded their activities in Louisiana and prepared for a final large unit training opportunity in the Carolinas.

The Carolina games commenced on 16 November 1941 and evaluated a battle between an infantry heavy force numbering 195,000 (General Hugh Drum's First Army) against a smaller mechanized heavy force numbering 100,000 (Major General Oscar W. Griswold's IV Corps). Assigned to the smaller force, Patton's Second Armored Division attempted to repeat the stunning successes of the previous wargames. Facing numerical superiority, the IV Corps was unable to exploit its inherent mobile advantage. A shortage of infantry within armored formations was evident as well. During both phases, the armored units were used more as roving "fire brigades" to stem opposing force attacks than in their intended roles. Also evident was the inability of quartermaster units to properly fuel vehicles on the march. Prior to game commencement, the Assistant I Armored Corps G-4 summed up the problem to Patton: "General, in the I Armored Corps, we do not have trucks, tank trucks, cans nor men to move a hundred gallons of gas."[22] In order to remedy the situation, the assistant G-4 locally contracted railroad tank cars and used gravity to refuel the tanks. Similar to a Confederate cavalry raid, Patton's armored forces continued to press attacks behind enemy lines though he had to be reminded again of the precarious balance between combat power and sustainment. The 1941 maneuvers showcased Patton's effective use and movement of mechanized forces; exposure to large-scale logistical requirements during these games combined with his previous experiences from the First World War prepared him for his next assignment, commander of the I Armored Corps and the Desert Training Center.

Immediately after the attack on Pearl Harbor, Patton again faced the daunting task of training, leading, and sustaining combat forces in the field. Equipping an 8 million-man force, the US Army would continue facing materiel and personnel shortages during the first months of the war. Patton's selection as the I Armored Corps commander at Fort Benning, Georgia in late December 1941, he, and his staff, faced the basic shortages still afflicting a rapidly expanding American Army. Then First Lieutenant Porter B. Williamson (the previously mentioned assistant G-4 from Carolina) described his issued gear; "I rolled my bedding roll and strapped on my empty pistol holster. This was my full pack! No rifle, no ammunition, no canteen, almost nothing required to have a full military pack for a soldier."[23] Service troops were in short supply as well. At the beginning of World War II:

> Only 11 percent of the Army consisted of service troops, compared to 34 percent at the end of World War I. The unrealistically low ratio of service troops to combat troops made itself felt at once…few trained service troops were available for overseas duty; and service troops, beyond all others, were required in the early phases of the war. It was imperative that they prepare depots, receive equipment and supplies, and establish the essential services for combat troops.[24]

Tables of Organization and Equipment had to be "fleshed out" according to priorities set at the highest levels of the Army and U. S. government. Munitions were centrally controlled and a

combined Anglo-American Board oversaw distribution. Other classes of supply operated via decentralized procedures and within a wholesale logistical operation, "to free the flow of supply from the erratic pace of day-to-day demand, in order to gain flexibility in the use of transport, storage, and handling facilities."[25] These initial efforts severely affected the training and establishment of air and ground forces early in the war. The Army Inspector General reported in July 1942, "that lack of spare parts was accounting for from two thirds to three fourths of the disabilities among vehicles in the United States."[26] Even with these logistical difficulties, Patton's I Armored Corps arrived within 60 days at the Desert Training Center and in March 1942, training of the first forces to meet the Wehrmacht began.

Encompassing an area approximately the size of Pennsylvania, the Desert Training Center was a post established with a minimum of higher headquarters logistical support. Establishing bivouac, range, and other associated training areas taxed the existing staff officers to the limit. Newly arrived troops detrained improperly uniformed, and encountered shortages in equipment, tools, and supplies. Personal hygiene relied on G. I. issue steel helmets for washing hands, shaving, and bathing until at Patton's direction Army quartermasters contracted with a San Bernadino Sears and Roebuck store to supply enough washbasins for the expanding number of troops. Mindful of troop morale in the hot and dusty climate, Patton ensured running water, latrines, and showers outfitted the post within 30 days. Testing valuable lessons learned from the 1941 maneuvers, combat commands replaced brigades and division trains used to provide logistics and personnel were introduced as well. Establishing COMZs complete with airfields, railheads, and a road network afforded quartermaster units combined training with their ground force counterparts. Newly assigned ground and service staff officers too had the opportunities to train with their opposite number in both the employment and sustainment of large units. Patton's efforts at the Desert Training Center would not only prepare forces for the upcoming North Africa invasion, but also ensured that an additional 20 divisions received large-scale unit training until the Spring of 1944.

Operation TORCH

On 8 November 1942, the first ever Anglo-American amphibious invasion landed three separate task forces and quickly seized key parts of French North Africa. Once ashore, troops linked up with the westward advancing British Eighth Army, ultimately forcing the Afrika Korps off the continent. Five months of hard fighting against Rommel's desert veterans awaited inexperienced American troops. Quartermasters too encountered difficult conditions but garnered valuable logistics "seasoning" applicable to future operations; especially Operation OVERLORD, the invasion of Normandy.

From the beginning, TORCH faced logistical hurdles, including inexperienced Combat Service Support (CSS) troops and ill-trained staff officers. An operation of this scope and size had never been attempted, with American planners facing competing demands for shipping and equipment. Convoy size was limited due to escort availability and thereby decreased the number of vehicles available for operations once ashore. Forces were also staged from the United States and Great Britain, complicating an already complex coordination cycle. Merchant ships were loaded based on expediency or peacetime practices, ignoring the immediate requirements of combat forces. Poor supply marking and record keeping resulted in duplicate orders of Class II and IV supplies.

CSS troops exercised sloppy blackout, concealment, camouflage, and dispersal and truck convoy procedures, which added, further losses to an already diminished truck fleet. American infantrymen used to riding into battle "soon realized that a truck or vehicle in North Africa was worth ten times its value in the United States, and must not be abandoned until there was no hope of recovery."[27] After the poor employment of American combat arms at Kasserine Pass and continuing logistical deficiencies, TORCH commander Lieutenant General Dwight D. Eisenhower, replaced the corps commander Major General Lloyd R. Fredendall with Patton. The latter's "buoyant leadership and strict insistence upon discipline rapidly rejuvenated the II Corps and brought it up to a fighting pitch"[28]—just in time for the pivotal battle at Al-Guettar.

The Patton trademark of infusing a fighting spirit into all his soldiers including the CSS elements proved instrumental during Al-Guettar. Patton biographer Blumenson captures both his attention to fighting and commitment to logistics: "He [Patton] had to be ruthless, for he had only eleven days to shake his troops out of slovenly habits and into a state of alertness. At the same time he expedited the arrival of new equipment, clothing, and mail. He improved living conditions by insisting on better food and well-cooked meals."[29] Observing the poor state of many of his soldier's footwear, Patton requested the immediate requisition and delivery of 80,000 pairs of boots, with most arriving within 24 hours. Patton's attention to both warfighting and logistical issues proved decisive at Al-Guettar, but more importantly, the battle reinforced his keen understanding of both combat and sustainment. The battle also provided American ground and service forces valuable logistics lessons as well. Innovations such as the use of mules to move supplies, establishing forward supply points, evacuating damaged vehicles in the far forward combat areas, and thinking as soldiers first then as logisticians greatly enhanced the logistics capability within Patton's divisions and throughout his II Corps.

Haphazard at first, the North African campaign reaffirmed American reliance on the weight of materiel as opposed to manpower. The official Army Historian James A. Huston noted:

> The invasion of North Africa was a graduate school in logistics when too many officers had not yet completed elementary school in that subject, but on the whole the officers learned their lessons well. More importantly, "the operation impressed upon everyone a fact they already knew…the necessity for close co-ordination between tactical and logistical planning. The invasion served as a proving ground for developing data for supply replenishment, for service troops, for troop replacements, for casualty estimates, and for amphibious assault planning and support.[30]

Now assigned to lead the Seventh Army, Patton and the quartermasters would apply the hard earned lessons of the North African campaign against enemy forces on the island of Sicily.

Operation HUSKY

Leading an army of over 160,000, Patton along with Field Marshal Bernard L. Montgomery's Eighth Army began the invasion of Sicily on 10 July 1943. In many respects HUSKY was a rehearsal for OVERLORD. Improved and in-depth logistical planning prior to the invasion,

better equipment, and tested logisticians accompanied the assault elements. In addition, the invasion convoys originated within theater; easing coordination, command, and control of numerous ships and assault craft prior. The invasion would "also be a landmark in the development of amphibious logistics support, both in far-shore organization and equipment."[31]

Lacking adequate seaports and reliance on over-the-shore resupply, Patton hoped recently developed equipment would improve logistical sustainment. The new amphibious truck known as the DUKW or "duck" received its baptism of fire and performed magnificently. In *Logistical Support of the Armies, Volume I*, Dr. Ruppenthal describes the crucial role DUKW's played in Sicily and their impact on subsequent amphibious operations:

> The amphibians were used for many purposes, including some not intended. They carried stores far inland to forward dumps, evacuated casualties and prisoners, and in at least one emergency were used to transfer a Ranger battalion to meet a sudden enemy counterattack…but they demonstrated their usefulness in a hundred ways and proved themselves one of the most valuable "weapons" in the Allied arsenal. From HUSKY on no landing operation was to be attempted without them.[32]

Additional logistics lessons learned from TORCH, included "perfecting the methods of moving supply over the assault beaches, of decreasing the soldier's load, of weighing and balancing Quartermaster troops lists, and of using new Quartermaster packaging, crating, loading and marking techniques,"[33] were incorporated into the Sicily campaign.

Improving immediate availability of POL, water, and rations during the initial landing a palletized load (unit load) was introduced during HUSKY. Unit loads were, "water and gasoline packaged in 5-gallon cans, with 56 cans on each pallet; oil, in boxes of 24 quart cans, 30 boxes per pallet; and 5-in-1 rations in boxes, 60 fiber boxes per pallet and varied in weight from two to three thousand pounds."[34] Upon delivery to the assault area (usually by a DUKW), the pallet would be torn down, contents distributed for consumption, and the platform used to move nonpalletized materiel. Another item used for the first time during the Sicily campaign was the assault pack. Containing individual equipment for one soldier, these haversacks weighed fifty pounds and combined items ranging from clothing, rations, and cigarettes to toilet paper. For every 100 soldiers assaulting the beach, five assault packs were authorized. Equipment and new materiel resupply methods proved valuable, and the increasingly experienced logisticians and their staffs were proving their flexibility during combat operations.

Incorporating another lesson learned from the Tunisian campaign, a third echelon (supply) was established. Located not far from the forward battle areas, the G-4 commanded the assigned six sections. These logisticians were better able to monitor, forecast, and adapt logistics support as necessary. Ordnance, maintenance and medical evacuation improved when the corps G-4 staffs assumed these responsibilities from the army level G-4. However, by D+ 13 and with stiffening enemy resistance, the divisions and corps troops had outrun their supply lines. To deal with this problem corps and army level G-3 and G-4 staffs quickly met and cobbled together a temporary solution to maintain the flow of fuel, ammunition, and other supplies. From this the forerunner of the famed "Red Ball" express debuted during the Sicily campaign. Merging both corps and army

level transportation units and executing round trips covering up to 200 miles, the logisticians were able to resupply forward ammunition, fuel, and supply transfer points and keep the Seventh Army on the march. With adequate logistical support, Patton continued advancing against collapsing German resistance and liberated the final stronghold of Messina just ahead of Montgomery's Eighth Army.

Both the Tunisian and Sicily campaigns highlighted Patton's skill at rapidly moving his forces and logistics to sustain them in order to engage and defeat the enemy. In his book *Crusade in Europe*, Eisenhower praises Patton's mobility: "Speed requires training, fitness, confidence, morale, suitable transport, and skillful leadership. Patton employed these tactics relentlessly, and thus not only minimized casualties but shook the whole Italian Government so forcibly that Mussolini toppled from his position in late July."[35] Also in a letter to Marshall, Eisenhower praised Patton's "native shrewdness about logistics…and as a truly aggressive commander with brains."[36] Patton's combat and logistics units plus his staff elements constantly improved their abilities to fight and sustain their formations in the tactical environment. Now with the invasion of Europe quickly approaching, the logistics lessons learned from the Tunisian and Sicilian operations would be put to good use—as well as Patton and his Third Army.

Third Army Prepares for France

On 22 Jan 1944, Patton received word of his selection to lead the Third Army. Planned as an exploiting element once the initial lodgment had been established ashore in Normandy, the Third Army barely existed as a fighting force. With many of the divisions untried and staff echelons inexperienced, Patton again had to start from scratch and mold his army into a "hell on wheels" outfit. Luckily, he was able to keep his principal Seventh Army staff officers including his G-4, Walter J. Muller, who "functioned with such efficiency that Patton rarely inquired into his methods."[37] With operations in France expected to last considerably longer than Patton's two previous campaigns (Tunisia and Sicily at 30 and 38 days respectively), the Third Army had to quickly plan and prepare for logistics support on a much larger scale.

In mid-March, Patton greeted the remainder of his staff officers at Peover Hall near Knutsford, England to outline his plans for bringing Third Army up to fighting shape in the few remaining months before its commitment to combat. Finding suitable maneuver areas and planning training regimens were at the top of the list, but the whole gamut of logistics occupied the staff as well. Preliminary efforts focused on identifying new equipment requirements and requisitioning authorized TO&E. American divisions arriving in the United Kingdom possessed their personal kit and a few limited equipment items, but required "marrying up" with previously shipped gear. This ensured units received the latest in field equipment. Additionally, the Signal Section identified required radio nets, mapped circuits and obtained applicable supplies. The Engineers busily conducted "analyses of bridge requirements, road studies, traffic circulation plans, computation of supply requirements, and survey and mapping plans."[38] Patton even read *The Norman Conquest* by Edward A. Freeman, "paying particular attention to the roads William the Conqueror used in his operations in Normandy and Brittany."[39] In addition, the need to address the ongoing Quartermaster Troop shortage to support operations haunted initial planning. According to Colonel Everett Busch, Third Army Quartermaster General, "this question was the most difficult in many respects of any encountered during the preliminary phase."[40] It also

underscored the strategic and operational concerns logistics was playing in Europe's liberation and indirectly the combat ability of Third Army. Nowhere was this more evident than Patton's role in Operation BODYGUARD

Besides leading the Third Army, Patton also "commanded" the fictitious First U. S. Army Group (FUSAG). As part of the FORTITUDE SOUTH component of BODYGUARD, Patton and FUSAG were created to deceive German intelligence into believing the Pas de Calais would be the actual landing areas for D-Day. The German High Command (OKW) determined Patton would lead the invasion force and his billeting in Southeastern England plus the combination of real and fake units added to the deception. Adding to the plausibility were both Allied and German strategic and operations logistics concerns:

> What made the story particularly believable to OKW was the terrain associated with the Pas de Calais. It was the closest to England, providing the shortest invasion route. It provided the most direct route to the Ruhr, the industrial heart of Germany and the anticipated objective of any invasion. The area boasted an excellent road and rail network to the interior and finally the port of Le Havre, France, would provide the Allies with a superb facility to sustain any drive on the continent.[41]

Patton and FUSAG kept up "appearances" even after the invasion. Deception operations continued until the first week in August, but with Patton's quiet deployment to France on 4 July, BODYGUARD continued to diminish in effectiveness. Trading his comfortable English manor for a canvas tent in a Norman orchard, Patton prepared to activate his headquarters known as "Lucky Forward." En route, or already in France, were five hundred units of the Third Army awaiting orders to attack.

Race to the Siegfried Line

Officially activated on 1 August 1944 (but not publicly acknowledged until 15 August), Third Army spent the preceding two months transiting from England, bivouacking within the narrow Cotentin Peninsula, and scrounging available Class I, III, and V supplies. Colonel Muller and the remainder of his small G-4 staff (nineteen officers, three warrant officers, and forty enlisted men) began the campaign "adapting and improvising" to an ever-changing logistics situation. First, almost all supplies were still arriving at Omaha and Utah beaches instead of the anticipated Cherbourg port, causing substantial problems in distribution and storage. Initial tonnages delivered approached planned figures, but due to a heavy gale (19-22 June) and damage to the MULBERRY artificial harbors, the logistics buildup schedule fell behind. Eventually only the British MULBERRY remained in operation. Secondly, Montgomery requested a faster buildup of combat forces with a proportionate delay in their accompanying service and support troops. With more "tooth" and less "tail," "some shortages occurred in supplies, but with the exception of artillery ammunition these were not serious because casualties and materiel consumption were less than anticipated."[42] Thirdly, the planned COMZ organizational structure did not become operational as scheduled. The Advance Section Communications Zone (ADSEC) was present in France, but Colonel Busch was concerned that there was "no opportunity for a warming up, smoothing out period either for Third Army's Quartermaster section or ADSEC..."[43] Finally,

rapid changes in the strategic and operational situation would play havoc as the Third Army roared through Avranches, Brittany and across France to the Siegfried Line.

Operation COBRA and the breakout from Normandy brought Patton and his Third Army finally into action. The rapid rate of march and overwhelming of enemy forces, immediately affected ADSEC and COMZs ability to supply Patton's voracious appetite for fuel and other supplies. Eminent British historian John Keegan describes the initial breakout through Avranches and Patton's logistical common sense:

> Sending clusters of senior officers out to the feeder routes which led to it with orders to keep the vehicles rolling without regard for strict sequence of units; at the other end, the bunched columns were unscrambled by the simple means of marking each of the roads which fanned from it for a separated division. In this way, which defied every rule of staff college logistics, his seven divisions were got into the new theater of operations in seventy-two hours.[44]

Keeping pace to support Patton and Lieutenant General Courtney Hodges' First Army, ADSEC moved forward three times in as many weeks. However, as the administrative elements moved forward, accompanying depots and supply points could not keep pace. At the end of August, "90 to 95 percent of continental supplies still lay on the beaches, 300 miles behind the army dumps."[45] With enemy forces retreating towards Paris or French ports still under German control, Twelfth Army Group commander, Lieutenant General Omar Bradley changed Patton's original battle plan to reflect a quick drive towards the Seine, and not the all-out effort mopping up resistance throughout the Brittany Peninsula. Splitting the Third Army in two, only the VIII Corps remained behind to secure Brest and St. Malo and their accompanying port facilities. This partition furthered strained resupply efforts within Third Army and the remainder of Allied Forces in France.

During August 1944, supply support for Major General Troy Middleton's VIII Corps emphasized not only the adaptability and dedication of the quartermaster corps, but also the impending logistical difficulties Patton would face as he approached the German frontier. As a tactical headquarters, Middleton's VIII Corps assumed many administrative and tactical responsibilities normally associated with higher echelons. William M. King of the 44th Armored Infantry Battalion, 6th Armored Division described the logistical situation during the breakout:

> Supplies were secured on the basis of expediency…permanent supply dumps were out of the question because the breakthrough had never stopped. Within a couple of days [we] were passing out rations like Santa Clause on his sleigh, with both giver and receiver on the move…The trucks were like a band of stage-coaches making a run through Indian country. We got used to keeping the wheels rolling, disregarding the snipers, and hoping we wouldn't get lost or hit.[46]

The quartermasters certainly could perform logistical feats of magic, but the VIII Corps attack revealed "the normal difficulty of satisfying even the minimum requirements in a period when the logistic organization is over-taxed by the pressure of pursuit operations."[47] Shortages in all supply classes, especially ammunition, afflicted the VIII Corps throughout the 40-day operation.

These limitations were not only due to an allocation problem, but a shortage of available transportation throughout France proved the limiting factor.

As Patton continued focusing his main energies eastward towards Germany, Third Army quartermasters struggled to keep his spearheads fueled and supplied. Just six days into battle, the Third Army daily combat diary recorded that "supply lines were lengthening rapidly and putting a strain on the truck companies."[48] Dipping into emergency ration reserves began almost immediately, with corresponding "acquisition" (also known as stealing or liberating) of available fuel stocks from other units. The advance moved so rapidly, that communication wire soon was in short supply as were medical supplies. Third Army G-4 requested additional truck companies and aviation groups to increase medical evacuation and resupply efforts. In late August, over 1,000 aircraft delivered rations and fuel to Patton's forward elements—averting a complete halt for a few more days. Captured German food, medical supplies, POL, and communications wire were also reallocated for immediate use. Eventually, German POWs contributed to the repair and refurbishment of materiel. At Depot Q-256 near Reims, France, the commanding officer Colonel Albert Barden formed "an elaborate German officer staff, which handled practically all details of POW administration, both in the prison compound and in the shops…Incidentally, one couldn't ask for better personnel."[49] Significant amounts of materiel were repaired and the workload continued increasing up until the German surrender. "At the close of 1944, the depot had processed nine million items and in March 1945 was handling 160,000 pieces per day."[50] Host nation support played an important role as well. French rail lines were used but due to significant damage caused by the pre-invasion interdiction campaign and French underground sabotage efforts, supply tonnage transported was small when compared to that delivered by truck (up until October 1944). The reopening of mines, industrial shops for repair and reclamation efforts, plus the supply of limited food stuffs supported Third Army efforts; especially in the Civil Affairs arena. With the Third Army and other Allied armies rapidly approaching the German frontier, COMZ logisticians endeavored to keep all Allied Forces fed, fueled, and armed, but faced a continuing shortage of trucks and misplaced allocation priorities. COMZ's answer to expedite supply deliveries would be the Red Ball Express.

Activated on 25 August 1944, the Red Ball Express was intended as a temporary measure to keep the American First and Third armies supplied across ever-widening LOCs originating in Normandy. The Express relied on 67 Transportation Corps truck companies, vehicles from other combat support units (for example, artillery and anti-aircraft units) and the trucks from three infantry divisions. At its peak, Red Ball operated 6,000 vehicles and moved 12,000 tons of supplies daily. A calculated tactical decision by Allied leaders, "the scale of these motorized operations was a complete surprise to the enemy and upset his calculations."[51] Unfortunately, short-term battlefield advantages attributed to the Red Ball brought with them accelerated wear and tear on personnel and equipment plus poor shipment documentation and control. Driver fatigue contributed to a large number of accidents. There were also significant increases in malingering and black marketing. Required truck maintenance suffered as untrained provisional units kept the trucks rolling literally until the wheels fell off the vehicles. Tire replacement and stockage figures "rose from an average of 29,142 in preceding months to 55,059 in September, and in mid-September 40,000 of that type awaited repair."[52] By mid-September, 135,000 tons of supplies were moved forward but due to haste and inattentiveness much of the materiel delivered

was not what the armies had requisitioned. Poised to enter Germany, Third Army watched its supply situation steadily deteriorate even with the Red Ball Express' Herculean efforts.

In action for just 30 days, Third Army units had dashed across France, liberated the Brittany Peninsula, seized bridgeheads east of the Meuse River and occupied "forward positions at the phase line set for 2 April 1945 (D+300)."[53] With the Rhine River just over 100 miles distant, Patton now had to halt his "cavalry," and watch his supplies and fuel dry up. German units were able to reorganize within the Siegfried Line or withdrawal for refitting or reconstitution (for the Ardennes Counteroffensive). Previously accustomed to tactically oriented operations in North Africa and Sicily, Patton now had to compete for logistics with other Allied armies and within the context of General Eisenhower's overall strategic plan. The strategic situation in early September mandated logistics support towards the upcoming MARKET-GARDEN operation in Holland—especially gasoline and cargo aircraft. Operationally, Hodges' American First Army received the lion's share of what limited supplies trickled in via the Red Ball Express to support an impending drive to the Rhine and Montgomery's Holland venture. At least 14,000 tons of supplies per day were required to support both the First and Third Armies though the amount arriving barely approached 7,000 tons; with two-thirds going to Hodges' troops. Civil affairs requirements also affected COMZ's logistical flow to the Allied armies. German occupied territory was liberated at a much faster rate than envisioned in the original OVERLORD plan; causing reallocation of supplies and POL originally destined for front line forces. Twelfth Army Group chief of civil affairs "found that the French capital needed 2,400 tons of supplies daily and proposed that they be brought in by air."[54] This further diversion of aircraft occurred at the same time as Third Army gasoline deliveries halted in late August. Unable to advance, Patton's troops paused to regroup, conduct limited operations in the Lorraine Valley, and prepare for the eventual invasion of Germany.

The Lorraine Campaign

At the bottom of the supply priority list from September to November 1944, the Third Army could only mount infantry assaults against the Metz fortifications and other local German strong points. Continually plagued by fuel, munitions, and other supply shortages, Patton's logisticians pulled every rabbit out of the hat to sustain the troops. Patton did authorize "three-day passes for those soldiers who could steal the most gasoline drums, full or empty—American or enemy,"[55] but his forces actually relied more on strict rationing of fuel and ammunition. A gasoline rationing board consisting of one officer and three enlisted men determined a daily allotment of "five thousand gallons for the infantry divisions; twenty-five thousand gallons for the armored formations; ten thousand gallons for the corps troops, and eighty-four thousand gallons for the Army troops."[56] Military policemen were kept busy "apprehending jeeps and command cars without authorized trip tickets."[57] Third Army artillerymen "stressed observed fires and held unobserved fires to a minimum to conserve ammunition."[58] Even liaison aircraft were used to curtail enemy fire. German artillery refrained from firing when spotter planes were airborne, thus minimizing American counter battery fire. Adapting these aircraft to a combat support role, "liaison pilots of the 80th Division artillery, dropped over 20,000 rounds of small arms ammunition to the 3rd Battalion, 318th Infantry, isolated for three days near St. Genivieve, France."[59] Patton's quartermasters also used enemy parts and equipment to assist with maintenance and equipment repair and to provide additional mobility.

Due to the static tactical situation, units were now able to forward reports of captured enemy materiel. Obtaining a warehouse in Nancy, the Third Army QM "organized a captured enemy materiel guard and inventory detail within his Field Service Section."[60] Materiel inventories were circulated to all QM sections, technical services, and staff directors. A veritable treasure trove for ordnance and maintenance personnel, items such as "14,000 German spark plugs were modified to refurbish Sherman tank engines and many German motorcycles were rebuilt with captured spare parts and reissued to U.S. troops."[61] The unexpected respite also provided time to prepare for winter campaigning and the impending invasion of Germany.

Preparing for the expected cold and rainy European winter, Colonel Muller initiated winter clothing requisitions and pre-staging of Bailey bridging sets to prepare for the eventual crossings of German rivers. Always concerned about the welfare of his troops, Patton raised his ire when he learned rubber overshoes were issued on a one pair for four men basis—"complaining bitterly until a more reasonable issue was established."[62] He also wanted plenty of bridging available to quickly get his troops across the icy and rain swollen rivers. Bailey bridges built during the pell-mell dash across France were disassembled and restaged forward in camouflaged positions, ready for immediate placement. Though he was obviously anxious to get moving again, these three months of limited operations allowed Patton to refit weary troops, reconstitute available equipment, and buildup supply reserves.

Many of the Allied armies on the go since D-Day were still engaged in heavy combat while Third Army conducted limited attacks in the Lorraine Valley. Able to "stand fast" in one location for a brief period, Patton did not allow a "garrison" mentality to develop. Along with the November attack against Metz, robust patrolling occurred when logistically feasible. Husbanding of supplies, ordnance repair, additional training, and rest were the order of the day. New railheads at Nancy, Chambley, Belleville, Dieulouard, Barancourt, Trieux, and Audun-le-Roman greatly improved daily delivery and establishment of supply dumps. Tanks ridden hard since fighting began received long overdue maintenance; however, units such as the 4th Armored Division were continually kept in the line. Ordnance and maintenance repair facilities were established or located in French and Belgian factories, greatly increasing efficiency and morale of the overburdened maintainers. Equipment modifications such as welding additional tank armor or installing extended end connectors or "duck bills" on the treads of medium tanks improved both the protection and traction on mud and soft terrain. Approximately 1 million of the plates were constructed in forty plants located near Paris and the Liege-Charleroi area. Additional training for the impending West Wall assault, or attending a new floating Bailey bridge school occupied many Third Army troops. Patton too could be seen "everywhere in his army area addressing his troops and radiating optimism."[63] Guaranteed mail deliveries, hot chow and showers, plus liberal distribution of passes and unit rotations out of the line all contributed to high morale despite miserable weather. After capturing Metz on 13 December and with the logistics tail catching up with the frontline forces, Eisenhower gave Patton the go ahead to conduct a breakthrough to the Rhine River scheduled for 19 December. Third Army forces were ready to get back on the move. Fortunately for the Allies, Patton and his staff were prepared for other contingencies—such as the Ardennes Counteroffensive.

Battle of the Bulge

Many in the Allied high command were caught off guard when German forces smashed into the thinly held Ardennes sector on the morning of 16 December. Patton and his G-2, Colonel Oscar W. Koch, were not. Anticipating an attack on 12 December, Patton directed "his Staff to make a study of what the Third Army would do if called upon to counterattack such a break-through."[64] Colonel Koch even sent a report to SHAEF on 13 December "warning of the continuing buildup of German forces east of First Army's VIII Corps area."[65] Third Army Staff members, especially the G-4 and other logistics related sections prepared to reorient the entire army 90 degrees, move it over 100 miles in the middle of winter in a period of 72 hours, and then attack with three divisions in the lead. At the 19 December senior staff meeting at Verdun, Patton briefed Eisenhower, Bradley and other major Allied officers on his general plan of attack. Patton's aide Colonel Charles R. Codman described the reaction from those present, "There was a stir, a shuffling of feet, as those present straightened up in their chairs. In some faces skepticism. But through the room the current of excitement leaped like a flame."[66] Patton's army and logisticians would now "be responsible for a major effort to knife into the German southern flank."[67]

Quickly preparing for the planned 23 December attack, Third Army quartermasters and transporters focused their initial efforts towards the vital road hub of Bastogne. Colonel Busch, described the supply redeployment:

> Longwy, France was selected from the map as the Quartermaster transfer point because of its good rail connections with Verdun and points in the new area, and by 182030 December, after a conference of the Quartermaster staff, the plan of supply was settled. It was arranged by telephone to load rations aboard cars at Verdun and to have a locomotive ready, to load 100,000 gallons of gasoline aboard Army trucks at Briey and Manicieulles; and to alert railhead, gasoline and service troops at Supply Point Number 57, Koenigsmacker (near Thionville). Officers were sent in jeeps with orders to lead and accompany the supplies and service units to the railway station at Longwy.
>
> The operations officer was to proceed from Nancy to Longwy, approximately 100 miles and take charge. The operations officer arrived at Longwy at 190900, the rations from Verdun and the gasoline from Briey and Mancieulles arrived between 0900 and 0930 and the service units a few minutes later. At 190945 the Quartermasters of the two leading divisions reported and before 1000 hours were drawing supplies. This switch, concluded in less than fourteen hours, was blessed by an extraordinary amount of good luck.[68]

Transportation sections were busy moving 11,800 vehicles over four troop movement routes "even though vehicles encountered a landslide, a weakened bridge, enemy bombing and strafing, and several wrecks which caused a number of detours."[69] Attacks still commenced as scheduled. In just three days elements of the 37th Tank Battalion, 4th Armored Division reached the beleaguered Bastogne garrison allowing much needed resupply and medical evacuations. Described by Patton's superior, Bradley as "one of the most astonishing feats of generalship of our campaign in the West,"[70] Third Army's swift attack hit the rear echelons of the still advancing panzer spearheads, further weakening the German attack and ultimately preparing the battlefield for an Allied counterattack in early 1945.

The Battle of the Bulge highlighted the agility and skill of the Allied logistics system and individual logistician. The entire COMZ endeavored to sustain Allied forces by rapidly relocating supply and fuel dumps or forwarding critical items to the front. Third Army ammunition trains moved an average of 4,500 tons of ammunition per day during the last half of December and consumed on the average, only 3,500 tons per day. American fuel captured and used by enemy forces equaled no more than 100,000 gallons, but fuel successfully evacuated during the chaotic 17-19 December 1944 period equaled three million gallons. Third Army requested fifty thousand yards of white muslin to fashion white tunics as winter camouflage. COMZ did not have the material available but instead provided five thousand mattress covers which yielded ten thousand white snowsuits. Though successful in almost all areas, quartermasters faced continuing problems providing effective winter footwear to American G.I.s. Many of the overshoes issued to troops were discarded due to poor traction or a decrease in foot speed or worn without combat boots; substituting them with "cardboard insoles or Dutch felt slippers or in some cases several thicknesses of blanket."[71] Even with these field expedients, trench foot and frostbite cases would hospitalize "44,728 men by the end of April 1945."[72]

On to the Rhine

Officially, the Battle of the Bulge concluded on 28 January 1945. Again able to refocus on offensive operations, Patton continued pushing his forces eastward towards the Rhine. Facing tough winter weather and favorable defensive geography, his Third Army endeavored to reach the Rhine first, only to be beaten by Hodges' First Army at the Ludendorff Bridge near the town of Remagen on 7 March. Vigorously pursuing enemy forces, Patton linked up with Hodges by 11 March and began preparations to conduct the first assault crossings of the Rhine in modern history.

Extensive logistical support as well as improvisation were crucial to continuing Third Army successes leading up to the Rhine crossing. Restored rail lines and shorter truck hauling distances initially kept Third Army units well supplied. As operations proceeded deeper into Germany, truck transit distances approached those of late August 1944, though German autobahns lessened actual delivery times. Air Transport Service aircraft kept Patton's spearheads rolling with "approximately twenty-five percent of the gasoline provided by air."[73] Mobile tire repair teams also kept the Third Army on the move. Patrolling all main and auxiliary supply routes, these teams "were equipped with hot patches, tubes, tires and air compressors. When wheels were available, tires and tubes were premounted for direct exchange."[74] In addition, preplanned priority deliveries of bridging, pontoons, and treadways as well as the requisite buildup of supplies and POL preceded the planned 22 March 1945 Rhine assault. Patton even considered mustering all Third Army L-5 liaison aircraft, "each carrying one infantryman, and making several trips an hour…to transport several regiments over the river and behind the enemy fortifications."[75] After G-2 determined minimal opposition could be expected the ambitious air assault plan was dropped in favor of the planned river crossing. Without a preparatory artillery bombardment, the 5th Infantry Division (XII Corps) crossed the Rhine at Oppenheim, ten miles south of Mainz. So complete were Third Army Staff and quartermaster preparations that "within 36 hours of the initial crossing, a treadway and pontoon bridge had been erected, and by the 24th both the 26th Infantry and 6th Armored Divisions had crossed into the bridgehead area."[76] Encountering light and confused resistance, Patton's Third Army continued mopping up German

forces east of the Rhine. With the First Army wheeling left to seal off the Ruhr pocket, Eisenhower directed the Third Army towards the "National Redoubt" in the Bavarian Alps to prevent possible Nazi guerilla attacks and then onto the partial occupation of Czechoslovakia. Patton and his beloved Third Army would not lead the final attack on Berlin.

Lessons for Today's Joint Logistician

An examination of both Patton's career and Third Army operations during 1944-45 provides many lessons for today's joint logistician. First was Patton's extraordinary knowledge of military history. Studying the campaigns of Alexander, Caesar, and Napoleon provided Patton with more than lessons in leadership and command—their successes as great commanders relied on logistical prowess. Today commanders and their joint logisticians too must maintain secure lines of communication, husband resources before campaigning, and rapidly reconstitute forces after battle to ensure continued success in the modern battlespace, although at a much faster pace and with considerably less resources available. Applying a robust study regimen similar to that practiced by Patton is still practical in the twenty-first century. Road networks, seaports, and topography have changed very little since antiquity (for example, both the Greeks/Spartans in 480 BC and British forces in 1941 defended the Thermopylae Pass) and understanding previous campaigns will greatly assist both the joint force commander and the joint logistician.

Patton's exposure to the beginnings of both motorization and mechanization did not change his approach to warfare but did increase the ability to sustain his forces. A dominant figure in the evolution of armored warfare, he employed military forces successfully because of his ability to logistically support them over longer distances and at a much faster rate. As the services "transform" to fight in the twenty-first century battlespace, commanders too will witness continual technological improvements in mobility, weapons platforms, and precision ordnance; however, mission accomplishment will depend upon their abilities to logistically sustain expeditionary forces. With many overseas posts closed and "mountains of materiel" no longer available to maintain forces in combat, deployed units will be tethered to CONUS based lines of communication. Joint logisticians will have to explore, adopt, and adapt current and future technology to assure timely and adequate support over much greater distances.

Third Army's style of fighting mirrors much of Joint Vision 2020—especially relating to dominant maneuver, precision engagement, and focused logistics. Patton relished the breakout, pursuit, and attacking of German forces in August 1944. Similar to Nathan Bedford Forrest's cavalry raiding during the American Civil War, Patton's operations across France during that critical month relied on speed, maneuver and overwhelming strength at the right place to defeat the withdrawing Wehrmacht. Patton seemed to be echoing Forrest's "advice associated with his name: 'Git thar furst with the mostest,' an astute, albeit homey, rewording of Jomini's fundamental principle to be strong at the decisive point."[77] During the Lorraine campaign, Patton relied on his logisticians to maintain limited operations, but more importantly to stockpile resources for an eventual move into greater Germany. Engaging the panzer spearheads during the Battle of the Bulge, Patton combined dominant maneuver, precision engagement, and focused logistics to move his Third Army into position, attack, and exploit the Allied counterstroke. By analyzing Third Army operations and understanding Patton's style of fighting, the joint

logistician has an impeccable "playbook" to combine with joint doctrine and ensure support to the warfighter.

The most important lesson for today's joint logistician is to make every effort to properly equip and support each individual soldier, sailor, airman, or marine. Patton led from both the front and rear. He strongly demanded additional gasoline and ammunition for his forces; however, requests for dry socks, hot chow, or replacement clothing would be worded in similarly strenuous terms. Any source of supply was considered and the use of host nation support, local purchase, and enemy prisoners of war augmented the quartermaster's efforts to refurbish equipment and provide needed clothing. He also expected his staff officers to spend time "up front" to gauge the battle and see what additional support the troops required. His logisticians understood the importance of personal items in maintaining morale and overall fighting ability.

Patton and the accomplishments of the Third Army will continue to be a testament to the bravery and adaptability of the American warrior. Their performance during the European fighting of 1944-45 highlights the central role logistics plays in any military operation. In addition, Patton's knowledge of military history, understanding and incorporating the latest technology, employment of combined arms, and his genuine concern for the troops provides logisticians and leaders alike a worthy example to study and emulate. His adage: "Gentlemen, the officer who doesn't know his communications and supply, as well as his tactics, is totally useless" is still applicable today, and is valuable advice to all who will fight America's wars in the twenty-first century.

Notes

1. Roger H. Nye, *The Patton Mind: The Professional Development of an Extraordinary Leader* (Garden City: Avery Publishing Group, 1993), 28.

2. Martin Blumenson, *Patton: The Man Behind the Legend 1885-1945* (New York: William Morrow and Company Inc, 1985), 8.

3. Major General John J. Pershing, *Report of the Punitive Expedition* (Headquarters Punitive Expedition, US Army in the Field, Colonia Dublan, Mexico: 1916), 61.

4. Blumenson, 89.

5. Major George C. Marshall, "Factors Contributing to Morale and Esprit De Corps," address, Military Schools and Colleges Association, March 1923.

6. Nye, 43.

7. Ibid, 45.

8. Ibid, 47.

9. Richard M. Leighton and Robert W. Coakley: *Global Logistics and Strategy, 1940-1943,* (Washington D.C., Center of Military History, U.S. Government Printing Office, 1995), 10.

10. Ibid, 12.

11. John T. Nelsen II, *General George C. Marshall: Strategic Leadership and the Challenges of Reconstituting the Army, 1939-41* (Carlisle Barracks, Strategic Studies Institute, U.S. Army War College, 1993), 12.

12. Ibid, 12.

13. Colonel H. F. Sykes, Jr., "Logistics and World War II Army Strategy," *Military Review,* (February 1956) Volume XXXV, no. 11, 49.

14. Ibid, 49.

15. Leighton and Coakley, Pg 14.

16. Christopher R. Gabel, *The U.S. Army GHQ Maneuvers of 1941* (Washington D.C., Center of Military History, U.S. Government Printing Office, 1992), 27.

17. Leighton and Coakley, Pg 72.

18. Paul F. Gorman, *The Secret of Future Victories* (Fort Leavenworth, Combat Studies Institute, U.S. Army Command and General Staff College, 1992), 2-13.

19. Ibid, 2-13.

20. Ibid, 2-19.

21. Ibid, 2-20.

22. Porter B. Williamson, *Patton's Principles* (Tucson, Management and Systems Consultants, Inc. Arizona Lithographers, 1979), 16.

23. Ibid, 31.

24. Lieutenant Colonel David C. Rutenberg and Jane S. Allen, *The Logistics of Waging War: American Military Logistics 1774-1985,* (Gunter Air Force Station, Air Force Logistics Management Center, 1985), 83.

25. Leighton and Coakley, 321.

26. Ibid, 320.

27. Major (P) John M. Taylor, *North African Campaign: Logistics Lessons Learned*, Military Review, (October 1983), Volume LXIII, no. 10, 51.

28. Dwight D. Eisenhower, *Crusade in Europe* (New York, Doubleday Press, 1948), 150.

29. Blumenson, 183.

30. James A. Huston, *The Sinews of War: Army Logistics 1775-1953* (Washington D.C., Center of Military History, United States Government Printing Office, 1987), 519.

31. Roland G. Ruppenthal, *Logistical Support of the Armies, Volume I* (Washington D.C., Center of Military History, United States Government Printing Office, 2000), 331.

32. Ibid, 334.

33. William F. Ross and Charles F. Romanus, *The Quartermaster Corps: Operations in the War Against Germany* (Washington D.C., Center of Military History, United States Government Printing Office, 1991), 75.

34. Ibid, 80.

35. Eisenhower, 176.

36. Blumenson, 216.

37. Ibid, 217.

38. Charles M. Province, *Patton's Third Army: A Chronology of Advance, August, 1944 to May, 1945* (New York, Hippocrene Books, 1992), 12.

39. General George S. Patton. *War As I Knew It* (Boston, Houghton Mifflin Company, 1947), 71-2.

40. Colonel E. Busch, *Third Army Quartermaster Operations* Military Review, (October 1946), Volume XXVI, no. 47, 56.

41. Major James R. Koch, *Operation Fortitude: The Backbone of Deception* Military Review, (March 1992), Volume LXXII, no. 03, 69.

42. Forrest C. Pogue, *The Supreme Command* (Washington D.C., Center of Military History, United States Government Printing Office, 1989), 175.

43. Busch, 56.

44. John Keegan, *Six Armies in Normandy* (New York, Penguin Books, 1994), 237.

45. Ross and Romanus, 398.

46. Martin Blumenson, *Breakout and Pursuit* (Washington D.C., Center of Military History, United States Government Printing Office, 1978), 354.

47. Dr. Roland G. Ruppenthal, *Ammunition Supply in the Battle for Brest*, Military Review, (December 1950), Volume XXX, no. 09, 39.

48. Province, 20.

49. Ross and Romanus, 720.

50. Ibid, 721.

51. Ibid, 399.

52. Ruppenthal, 571.

53. Hugh M. Cole, *The Lorraine Campaign* (Washington D.C., Center of Military History, United States Government Printing Office, 1997), 20.

54. Pogue, 258.

55. Edgar F. Puryear, Jr., *19 Stars* (Novato, Presidio Press, 1994), 278.

56. Province, 62.

57. Cole, 293.

58. Province, 43.

59. Ibid, 47.

60. Ross and Romanus, 728-9.

61. Province, 75.

62. Cole, 295.

63. Blumenson, 241.

64. Patton, 143.

65. Province, 114.

66. Colonel Charles R. Codman, *Drive* (Boston, Little Brown and Company, 1957), 232.

67. Hugh M. Cole, *The Ardennes: Battle of the Bulge* (Washington D.C., Center of Military History, United States Government Printing Office, 1977), 487.

68. Busch, 62.

69. Province, 119-20.

70. Pogue, 381.

71. Ross and Romanus, 603.

72. Ibid, 600-601.

73 Busch, 63.

74. Province, 216-217.

75 Brigadier General Brenton G. Wallace, *Patton and His Third Army*, (Harrisburg, The Telegraph Press, 1946), 181.

76. Ibid, 182.

77. Alger, John I., "The Quest for Victory." In *Words on War.* Edited by Jay M. Shafritz. (New York, Simon and Schuster Inc., 1990), 387.

Bibliography

Alger, John I. "The Quest for Victory." In *Words on War.* Edited by Jay M. Shafritz. New York, N.Y.: Simon and Schuster Inc., 1990.

Blumenson, Martin. *Patton: The Man Behind the Legend 1885-1945.* New York, N.Y.: William Morrow and Company Inc., 1985.

Blumenson, Martin. *Breakout and Pursuit.* Washington D.C.: Center of Military History, United States Government Printing Office, 1978.

Busch, Col E. "Third Army Quartermaster Operations." *Military Review* Volume XXVI, no 47 (October 1946): 56-66.

Codman, Col Charles R. *Drive*. Boston, MA.: Little Brown and Company, 1957.

Cole, Hugh M. *The Ardennes: Battle of the Bulge*. Washington D. C.: Center of Military History, United States Government Printing Office, 1977.

Cole, Hugh M. *The Lorraine Campaign.* Washington D. C.: Center of Military History, United States Government Printing Office, 1997.

Eisenhower, Dwight D. *Crusade in Europe*. New York, N. Y.: Doubleday, 1948.

Gabel, Christopher R. *The U.S. Army GHQ Maneuvers of 1941.* Washington D.C.: Center of Military History, U.S. Government Printing Office, 1992.

Gorman, Paul F. *The Secret of Future Victories.* Fort Leavenworth, KS: Combat Studies Institute, U.S. Army Command and General Staff College, 1992.

Huston, James A. *The Sinews of War: Army Logistics 1775-1953.* Washington D.C.: Center of Military History, United States Government Printing Office, 1987.

Keegan, John. *Six Armies in Normandy.* New York, N. Y.: Penguin Books, 1994.

Koch, Major James R. "Operation Fortitude: The Backbone of Deception." *Military Review* Volume LXXII, no. 03 (March 1992): 66-77.

Leighton, Richard M. and Robert W. Coakley. *Global Logistics and Strategy, 1940-1943.* Washington D.C.: Center of Military History, U.S. Government Printing Office, 1995.

Marshall, Major George C. "Factors Contributing to Morale and Esprit De Corps." Lecture. Military Schools and Colleges Association, March 1923.

Nelson, II, John T. *General George C. Marshall: Strategic Leadership and the Challenges of Reconstituting the Army, 1939-41.* Carlisle Barracks, PA: Strategic Studies Institute, U.S. Army War College, 1993.

Nye, Roger H. *The Patton Mind: The Professional Development of an Extraordinary Leader.* Garden City, N.Y.: Avery Publishing Group, 1993.

Patton, General George S. *War As I Knew It*. Boston MA, Houghton Mifflin Company, 1947.

Pershing, Major General John J. *Report of the Punitive Expedition.* Headquarters Punitive Expedition, US Army in the Field, Colonia Dublan, Mexico, 1916.

Pogue, Forrest C. *The Supreme Command.* Washington D. C.: Center of Military History, United States Government Printing Office, 1989.

Province, Charles M. *Patton's Third Army: A Chronology of Advance, August, 1944 to May, 1945*. New York, N. Y., Hippocrene Books, 1992.

Ross, William F., and Charles F. Romanus. *The Quartermaster Corps: Operations in the War Against Germany*. Washington D. C.: United States Government Printing Office, 1991.

Ruppenthal, Dr. Roland G. "Ammunition Supply in the Battle for Brest." Volume XXX, no. 09 *Military Review* (December 1950): 39-46.

Ruppenthal, Dr. Roland G. *Logistical Support of the Armies, Volume I.* Washington D. C., Center of Military History, United States Government Printing Office, 2000.

Rutenberg, Lt Col David C. and Jane S. Allen, *The Logistics of Waging War: American Military Logistics 1774-1985.* Gunter Air Force Station, AL: Air Force Logistics Management Center, 1985.

Smith, Lt Col J. W. "Logistics As Seen From a Corps Level." Volume XXVI, no. 47 *Military Review* (October 1946): 58-62.

Sykes, Jr., Col H. F. "Logistics and World War II Army Strategy." Volume XXXV, no. 11 *Military Review* (February 1956): 47-54.

Taylor, Major (P) John M. "North African Campaign: Logistics Lessons Learned." Volume LXIII, no. 10 *Military Review* (October 1983): 46-55.

Wallace, Brig Gen Brenton G. *Patton and His Third Army*. Harrisburg, PA: The Telegraph Press, 1946.

Williamson, Porter B., *Patton's Principles*. Tucson AZ: Management and Systems Consultants, Inc. Arizona Lithographers, 1979.

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