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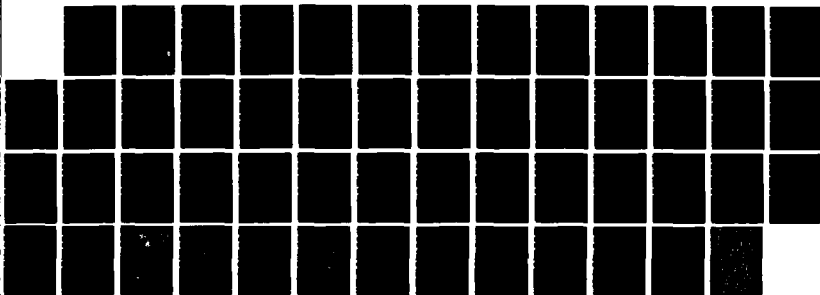
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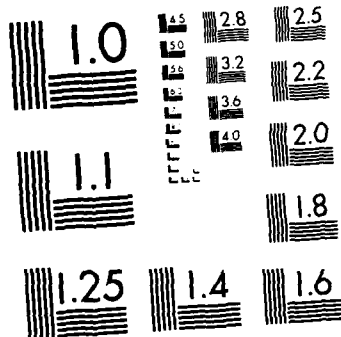
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Operational Reserves--
Renewing The Offensive Spirit

by

CHARLES R. GREGORY, MAJ, USA
Infantry

School of Advanced Military Studies
U.S. Army Command and General Staff College
Fort Leavenworth, Kansas

6 April 1988

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This paper determines if operational commanders should retain reserves during offensive operations. It examines what Clausewitz, Jomini, and other theorists wrote on the subject. Then it looks at three historical examples, the British during the Battle of the Irrawaddy, the Germans during the Battle of Northern Flanders and France, and the Americans during the Battle of the Bulge to discern lessons that can apply to the use of operational reserves in the future. The paper concludes with missions of operational reserves and considerations for employment during offensive operations. Clausewitz recognized the need for tactical reserves, but was concerned that if commanders retained operational reserves they might husband them and lose the battle. Jomini and other theorists studied in the paper were definitely in favor of commanders at all levels retaining reserves. The paper concludes that Clausewitz was not against (continued on other side of form)					
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19. operational commanders retaining reserves, but he was concerned with how these reserves were employed.

From the three case studies, the paper discerns six lessons: 1) During offensive operations, reserves should be used to reinforce the main effort; 2) An operational commander who has a reserve must not husband that reserve at the expense of the battle; 3) If a commander does not have the forces to form a reserve, a consideration is to pull it from less threatened sectors; 4) Reserves should not be employed piecemeal, they should be concentrated at decisive points; 5) The threat of reserves can cause an opposing force to design its operations to counter the perceived threat; 6) Reserves should not be constituted or reconstituted at the expense of winning the battle.

From the theories and case studies, the paper determines that doctrine as written in FM 100-5 is more than adequate for the employment of reserves. The paper concludes with a discussion of missions and considerations for employment of reserves.

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Renewing The Offensive Spirit

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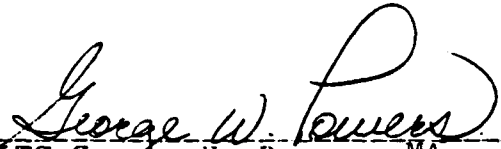
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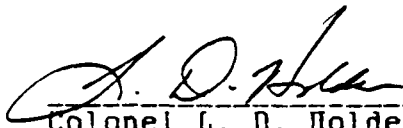
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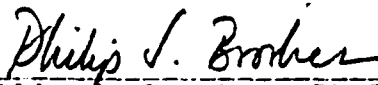
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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (Reference to this study should include the foregoing statement.)

ABSTRACT

This paper determines if operational commanders should retain reserves during offensive operations. It examines what Clausewitz, Jomini, and other theorists wrote on the subject. Then it looks at three historical examples, the British during the Battle of the Irrawaddy, the Germans during the Battle of Northern Flanders and France, and the Americans during the Battle of the Bulge to discern lessons that can apply to the use of operational reserves in the future. The paper concludes with missions of operational reserves and considerations for employment during offensive operations.

Clausewitz recognized the need for tactical reserves, but was concerned that if commanders retained operational reserves they might husband them and lose the battle. Jomini and other theorists studied in the paper were definitely in favor of commanders at all levels retaining reserves. The paper concludes that Clausewitz was not against operational commanders retaining reserves, but he was concerned with how these reserves were employed.

From the three case studies, the paper discerns six lessons: 1) During offensive operations, reserves should be used to reinforce the main effort; 2) An operational commander who has a reserve must not husband that reserve at the expense of the battle; 3) If a commander does not have the forces to form a reserve, a consideration is to pull it from less threatened sectors; 4) Reserves should not be employed piecemeal, they should be concentrated at decisive points; 5) The threat of reserves can cause an opposing force to design its operations to counter the perceived threat; 6) Reserves should not be constituted or reconstituted at the expense of winning the battle. SDU X

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INTRODUCTION

The operational level of war has seen a revival since 1982 with the revision of FM 100-5, Operations. This revision recognized that the U.S. Army required a linkage between the strategic and tactical levels for the conduct of campaigns and it mandated a new way of thinking for major commanders. This level is called the operational level of war. The term is new in U.S. doctrine but its practice returns us to methods of the past. During World War II (WWII) and Korea major commanders routinely practiced what is now called operational art in the design of campaigns and major operations. Vietnam saw the decline of this level as the nature of the conflict emphasized the tactical level. The return of the operational level provides the needed linkage between the strategic and tactical levels of war.

FM 100-5 distinguishes the operational level of war from the tactical level. The operational level deals with "the design and conduct of campaigns and major operations," whereas the tactical level "deals with battles and engagements."¹ An operational commander

...plans and executes campaigns and major operations that optimize the use of all available combat, combat support, and combat service support forces....Operational level commanders try to set favorable terms for battle by synchronized ground, air, and sea maneuver and by striking the enemy throughout the theater of operations.²

In NATO today the Allied Forces Central (AFCENT) Europe Commander is an operational commander. He integrates both land and air components and in some cases naval components. The Army Group commanders in NATO may or may not be operational commanders in this context but they are when conducting major operations. A corps commander is not an operational commander in NATO, but depending on the theater and level of activity he could become one. For the framework of this paper, when discussing large operations, operational command will be viewed from the perspectives of Army Group and AFCENT.

FM 100-5 also renewed the concept of offensive operations. Correct or not, a major perception of doctrine during the mid 70s was that it emphasized defensive operations and attrition style warfare.³ FM 100-5 has reemphasized maneuver warfare and large operations as practiced during World War II and asserts that while "defense is the stronger form of war", "offense is the decisive form of war."⁴ Offensive operations allow an army to impose its will on the enemy and sometime during a successful campaign, that is just what an army must do.⁵

One of the more important considerations when planning offensive actions is whether or not to retain a reserve and if so what missions to give it. There has been little written on the use of operational reserves particularly during the U.S. Army's experiences in World War

II (WWII). MG J. Lawton Collins, Commander of VII (U.S.) Corps during WWII once stated in a conversation with General Omar N. Bradley, then Commander of First Army, that he had never retained reserves for any of his battles. Bradley then commented, "I went all through Tunisia and Sicily without a regiment of reserve."⁶ These statements by two of the better known senior commanders of our past are important when deciding whether or not to retain operational reserves. Did they know something that U.S. doctrine of today has missed, or did they just not understand the importance of maintaining reserves at all levels? Based upon theory and history are operational reserves during offensive operations really necessary? This paper will examine these questions and determine if an operational commander should retain reserves during offensive operations. To do this the paper will first examine the theoretical propositions concerning use and retention of reserves at the operational level. Several theoreticians have written about reserves, but the two most important writers are Clausewitz and Jomini. The paper will examine their writings and others in conjunction with three historical case studies: the British during the Battle of the Irrawaddy, the Germans during the Battle of Northern Flanders and France, and the Americans during the Battle of the Bulge. These case studies were chosen to assess three different armies, at different times, and in different environments. The first two were obviously

offensive operations and although the Battle of the Bulge was a defensive battle, the U.S. Army was on the strategic offensive and had taken an operational pause in anticipation of returning to the offensive. These examples will demonstrate how the armies employed or failed to employ reserves at the operational level in an attempt to discern lessons that can apply to the use of operational reserves in the future. A definition of reserves will be developed and a review of U.S. doctrine concerning reserves along with potential missions of an operational reserve including considerations for employment. Finally this assessment will conclude with implications for the future.

THEORETICAL BACKGROUND

Since Clausewitz did not recognize an operational level of war he divided reserves into two types: strategic and tactical. The common perception is that he used the term strategy as writers today use the term operational.⁷ Clausewitz wrote that reserves have two purposes,

One is to prolong and renew the action; the second, to counter unforeseen threats. The first purpose presupposes the value of the successive use of force, and therefore does not belong to strategy.⁸

He used the example of a unit that is about to be overrun. The commander would place the reserve into the fray to counter the penetration. This involved the successive use of force and was in the realm of tactics. Thus, Clausewitz

envisioned the need for tactical reserves, but maintaining strategic reserves concerned him. He stated that strategic reserves should be used, "when emergencies are conceivable."⁹ Clausewitz had witnessed countries losing battles while still retaining strategic reserves which contrasted with Napoleon's principle that one can never be strong enough at the decisive point.¹⁰ He preached the strategy of the "law of simultaneous use of force" which translated to massing all forces at the decisive point to sweep the enemy from the field.¹¹ Tactically, a force could reduce losses by reducing forces; not so strategically. An army could even diminish losses by applying the law of the simultaneous use of force, because the overwhelming amount of forces would aid in ensuring victory. He concluded that if an army kept strategic reserves, then these reserves should have a specific purpose. The more general a reserve's mission, the less useful it became. He wrote, "We have called it an absurdity to maintain a strategic reserve that is not meant to contribute to the overall decision."¹²

Baron De Jomini was a firm believer in reserves at all levels.

Reserves play an important part in modern warfare. From the executive, who prepares national reserves, down to the chief of a platoon of skirmishers, every commander now desires a reserve. A wise government always provides good reserves for its armies, and the general uses them when they come under his command. The state has its reserves, the army has its own, and every

corps d'armee or division should not fail to provide one.¹³

Who is right? Are they both right? Both agree on the need for tactical reserves, but Clausewitz seems to argue against strategic (operational) reserves. More modern theorists reflect similar tensions.

Richard E. Simpkin in his book Race to the Swift discusses three points about maneuver theory. The third of which being,

...The manoeuvre theory system as a whole must contain an element of mass which remains available to respond to changes in the situation. In familiar terms, there must be a reserve, and this reserve should be recreated as it is expended.¹⁴

LTC Charles A. Willoughby in his book, Maneuver in War, writes that within the theory of maneuver, once the units are launched, the commander loses control, and "...the leader can materially influence the course of an action, once begun, only through the employment of his reserves..."¹⁵ Finally MG J. F. C. Fuller writes,

In mechanized warfare the value of a reserve force cannot be exaggerated, for increased mobility carries with it the power of effecting innumerable surprises, and the more the unexpected becomes possible the stronger must be the reserves. One of the great difficulties in the future will be to gauge the enemy's intentions, also it will frequently be most difficult to fix him in any definite locality; therefore, unless strong reserves are kept in hand, it will be impossible to meet unexpected situations.¹⁶

Clausewitz's view concerning retention of an operational reserve is in the minority but remains valid

even today. Clausewitz is not against maintaining both an operational (or what he called strategic) and a tactical reserve, but his concern is that a commander (or in his day a ruler) would husband the reserve and not release it when needed. His fear then is not that a reserve exists, but how it is employed. This is a logical corollary from his law of simultaneous force. If a commander forms a reserve at the operational level even if there may not be enough forces at the decisive point to ensure victory, he has made a mistake. Another factor is the increased mobility of forces since Clausewitz's day; this will be discussed later in the paper. In general these theorists appear to support retaining a reserve, the problem concerns its employment.

CASE STUDIES

BATTLE OF THE IRRAWADDY

After the battle of Imphal - Kohima, the Japanese Army in Burma was in disarray and retreating. General William J. Slim, Commander Fourteenth Army, realized that another battle could completely disrupt the Japanese Army allowing quick occupation of Burma and he therefore sought to force battle at the earliest possible opportunity.¹⁷ In planning for the offensive operation, Fourteenth Army Intelligence believed that the Japanese Order of Battle (OB) to be as follows: 5 1/3 divisions, one independent mixed

brigade, one tank regiment, 30,000 - 40,000 line of communication (LOC) soldiers, and two Indian National Army (INA) divisions.¹⁸ His intelligence was, as demonstrated later, wrong. The Japanese commander would pull forces from other fronts and Slim would actually face eight Japanese and 1 1/3 INA Divisions.¹⁹

The Fourteenth Army plan was to use the XXXIII Corps to attack across the Irrawaddy north and west of Mandalay, with the mission of drawing as many Japanese forces to it as possible. (Map A) The IV Corps would move south through the Gangaw Valley, cross the Irrawaddy at Pakokku and attack Meiktila with airborne and armored forces. Slim correctly analyzed Meiktila as the Japanese army's "hub of all power" because it contained all of the Japanese supplies, depots, hospital, airfields, and was a roads and railroad hub. By seizing and cutting the Japanese LOC's, the Japanese army would be cut off from its supply base. Once Meiktila was seized, the Japanese commander would be forced to detach units from the battle along the Irrawaddy to clear the LOC's allowing XXXIII Corps to continue its advance south. IV Corps would become the anvil and XXXIII Corps the hammer with the Japanese army trapped between the two corps. Slim would obtain his major battle and his intent - the destruction of the Japanese Army.²⁰

The 14th Army OB was: IV Corps consisting of 7th and 17th Infantry Divisions, 255 Tank Brigade (Shermans),

28th East African Brigade; XXXIII Corps consisting of 2d, 19th, and 20th Infantry Divisions, 254th Tank Brigade (Lee-Grants and Stuarts), and 268th Brigade.²¹ The 5th Infantry Division was in army reserve at Jorhat. The 5th and 17th Divisions were reorganized with one brigade group in each division each becoming transportable by air and all remaining brigade groups becoming completely mechanized to make these two divisions more mobile and give Slim greater options.²² Slim planned to use his reserve during the battle, particularly in the attack on Meiktila or the follow-up on Rangoon.

To execute the plan successfully, the Japanese commander had to believe that the main effort was the XXXIII Corps attacking Mandalay and then direct all his forces into the Mandalay area. IV Corps meanwhile would cross the Irrawaddy river vicinity of Pakokku and then dash for Meiktila. By the time the Japanese commander realized what was happening, IV Corps would have cut the Japanese LOCs. It was a bold and daring plan with much depending upon the success of the deception plan.

One of the major limiting factors to the success of the plan was the ability to sustain the forces. Slim's supply lines were severely strained and the air support had been flying many additional hours above what was recommended. Slim had to consider how to support reserves once they were committed with his supply system stretched to

the limit. Since adding another division might break the system, he planned to withdraw a division if and when he committed the 5th Division.²³

Fourteenth Army began its crossings of the Irrawaddy 12 and 13 February 1945.²⁴ During the ongoing battles when Slim began to realize that he was facing more enemy forces than expected, he went back to LTG Oliver Leese, Allied Land Forces Commander, and requested that more pressure be placed on the other Burma fronts and that the 36th British Division, belonging to the Northern Combat Area Command, be attached to the 14th Army. These requests were turned down so his only other recourse was to commit his reserve. Slim had to decide whether to risk losing the battle due to lack of troops or to commit the troops and risk overstraining his supply system. Slim committed the 5th Division to the IV Corps making the dash for Meiktila. As expected, supplies became a major problem, but these problems were overcome by shifting priorities, innovative ideas, and overworking people and machinery.²⁵

Meiktila took four days to capture, but its loss sealed the Japanese fate in Burma. Slim did not hesitate to commit his reserve when he saw the need even though it was not when originally planned. He did not husband this force because he knew that if he did not take Meiktila, he could not carry through with the rest of his plan. In his book, Defeat Into Victory, Slim does not mention reconstituting

another reserve. He understood Clausewitz's dictum about the application of simultaneous force at the operational level and that withholding reserves could lose the battle and subsequently the war.

BATTLE OF FLANDERS AND NORTHERN FRANCE (10 May-5 June)

On 24 February 1940, Adolf Hitler issued his revised Plan Gelb for the invasion of Belgium and France. Attacking forces from North to South were: Army Group B commanded by General Fedor von Bock composed of the 6th and 18th Armies with 29 1/3 divisions; Army Group A commanded by General Gerd von Runstedt composed of 4th, 12th, and 16th Armies with 45 1/3 divisions; and Army Group C commanded by General Ritter von Leeb composed of 1st and 7th Armies with nineteen divisions.²⁶ Hitler in his planning could count on about 136 out of 157 divisions for the invasion and approximately 1/3 of these could qualify as top-rated offensive material. The Germans would commit ten panzer divisions with approximately 2400 - 3000 tanks.

Army Group B would attack aggressively into Holland and Belgium with the mission to portray the main effort and to make the allies believe that the Germans were repeating the offensive of 1914. Army Group A was the German schwerpunkt with the bulk of the panzer divisions, air and artillery support.²⁷ The XIX Corps, the army group's schwerpunkt commanded by General Heinz Guderian, would

attack through the Ardennes at Sedan with the 1st, 2d, and 10th Panzer Divisions supported by the Grossdeutschland Regiment and the XIV Motorized Corps.(Map B) To the North of Guderian was another corps, commanded by General Reinhard consisting of 6th and 8th Panzer Divisions, with the mission to attack Montherme. To the north of Reinhard's Corps was General Hoth's Corps, consisting of 5th and 7th Panzer Divisions, which would attack across the Meuse at Dinant. Army Group C would fix French units along the Maginot line in the south.²⁸ 42 Infantry Divisions would follow Army Group A in strategic reserve.²⁹

The Allies OB contained three Army Groups. Army Group 1 commanded by General Billotte consisted of: Belgian Army of 22 divisions; British Expeditionary Force (BEF) with three motorized divisions and one tank brigade; French 1st Army with four infantry divisions, two light mechanized divisions, three motorized divisions, and one fortress division; French 9th Army with five infantry divisions, one motorized division, and two cavalry divisions; and French 2d Army with five infantry divisions and two cavalry divisions.³⁰ Along the Maginot line in Army Groups Two and Three were 36 infantry divisions including one British Division.³¹ The French Seventh Army was the mobile reserve with two motorized divisions, one light mechanized

division, and four infantry divisions. The French strategic reserve consisted of nineteen infantry divisions and three armored divisions.³²

Where the Germans were planning to fight decisively at the Meuse River, the French High Command believed the decisive battle would be fought along the Dyle River. The French did not believe that the Ardennes was trafficable to armored vehicles and they felt that if the Germans did come that way, Allied forces would have time to react. General Maurice Gamelin, Chief of the General Staff of National Defense and Supreme Commander of all French land forces, authored the Dyle plan in November 1939 which directed French and British forces to advance into Belgium at the outbreak of hostilities, and occupy positions already prepared by Belgians during peacetime.³³

By March 1940, Gamelin had added the Breda variant which moved the 7th Army forward another 100 miles to assist the Dutch vicinity Breda-Moerdijk, gave Army Group 1 two armored divisions and two infantry divisions due to the extended front, and reduced the strategic reserve to one armored division.³⁴ The allies total strength was between 137 - 140 divisions against the Germans 136 divisions. The French breakout by type of units was: 92 infantry divisions, six light and heavy armored divisions, six cavalry divisions and ten fortress divisions. The British, Belgian, and Dutch divisions added another 43 divisions.³⁵

General Gamelin believed that the Oberkommando des Heeres (OKH), the High Command of the German Army, was holding 45 divisions in reserve whereas they really only had 20 divisions. Although his intelligence informed him prior to the attack that the Germans had less forces in Army Group C against the Maginot Line, he refused to believe his intelligence and divert forces from the less threatened sector to Sedan. This is an example of the threat that reserves, whether or not they exist, can pose to an army. General Gamelin structured his plan based on prior perceptions and where he believed enemy forces were positioned. If he had listened to his staff, forces could have been diverted early on to more threatened areas.

The battle began on 10 May 1940 with the German Luftwaffe bombers striking deep into France, Belgium, and Holland targeting roads, railways, and airfields.³⁶ Airborne and glider units were inserted into enemy territory to seize bridges and choke points to facilitate the passage of the panzer divisions. Seven of the ten panzer divisions were in Army Group A with the other three in Army Group B. Army Group A had concentrated all seven panzer divisions along a 50 mile stretch of the Meuse river at three locations.³⁷ When the Germans began the advance their columns were stretched for miles. Except for some motorized divisions and regiments directly behind the panzer divisions, the bulk of the infantry divisions,

whose missions were to protect the shoulders of the penetrations as they expanded, marched several days behind the panzers. The real fear for Hitler and his senior commanders was that the French would counterattack against a flank left unprotected due to the lagging infantry. The lack of mobile reserves could have contributed to the potential defeat of the German forces. They had placed all their mobile forces in the first attacking echelon and if these had been defeated the war might have reverted to trench warfare. The Germans took several calculated risks during this campaign, but a key lesson is that they did not strip forces from the main effort for the sake of retaining an operational reserve. They had reserve forces, but it would have taken days for these forces to arrive at the scene of battle.

The French plan assumed that the Belgians and French Cavalry would hold the Germans for several days to allow the French forces time to deploy. The French Cavalry delayed the Germans for only two and one-half days and the Belgians under orders to link up with their main force, fell back destroying all bridges in sector and exposing the French flanks on the Meuse. The plan also assumed that the Belgians would prepare defensive positions so that all the Allied forces would do is occupy them, but when the French 1st Army moved to Gembloux, they found no positions prepared

and news of German panzers already crossing the Albert Canal.

The Germans moved quickly, concentrating tanks, artillery, and air at Sedan where they desired to achieve penetration. The French forces were not prepared for this concentrated fire power and the Germans penetrated their defensive positions. General Guderian then performed a highly risky maneuver by turning two of his panzer divisions directly west even after intelligence told him that French reserves were moving forward. His southern flank was exposed and if the French had mounted an effective counterattack, World War II might have had a much speedier outcome. The German schwerpunkt then split the boundary between the French 2d and 9th Armies, while the northern two tank corps hammered the French 9th Army frontally. By 16 May, just six days after the invasion began, the 9th Army was routed and the way was open for the Germans to dash to the sea. On the evening of 20 May, German elements entered Abbeville on the coast and the Allied armies in the north were trapped.³⁸

Much has been written about the reasons for the French debacle in 1940. One thing, however, remains clear. The Germans were not superior in equipment. French and British tanks jointly outnumbered German tanks and the qualitative differences were not that great. The French problems were with organization, doctrine, and training.

The French believed in defense on a continuous front with the infantryman as the main weapon. Tanks supported the infantry and as such were dispersed throughout the army under the control of the infantry. The French had formed three armored divisions, just prior to the German invasion and had no time to organize and train them. They had 11,200 artillery pieces to Germany's 7,710, but none were self-propelled as in the German panzer divisions.³⁹

The French were victims of their experiences of World War I (WWI) from which they had learned different lessons than the Germans. Since they still thought in terms of the tempo of World War I, many of the counterattacks they attempted would have worked in WWI, but at the speed the Germans moved during WWII the French were either late or when their orders reached the appropriate level, the opportunity was lost. As General Aime Doumenc later said,

Attributing to the enemy our own conceptions of time, we imagined that he would not attempt to cross the Meuse until he had brought up the bulk of his artillery. The five or six days we supposed necessary for this would give us time to reinforce our own position.⁴⁰

The French had the forces and equipment available to stop the Germans, but they failed to see the changing nature of war and correct their doctrine and organization.

The Germans understood the importance of mobile forces and penetrating deep into enemy territory to disrupt LOCs and turn flanks. They concentrated their armor to

capitalize on shock and mobility and concentrated support fires at the point of desired penetration. Their major problem lay with the bulk of the infantry divisions which were not mechanized. If the French had been able to stop the Panzer Divisions, with those panzers having behind them only foot mobile infantry divisions, the war might have taken on a different nature probably the WWI style trench warfare the French envisioned. The Germans had operational reserves, but they were not mobile and could not have exploited success as effectively as armored units.

By placing all their armor in the initial echelon the Germans demonstrated their understanding of Clausewitz's dictum concerning the application of simultaneous force. The Germans understood the importance of winning a quick victory and their greatest fear was that the French could stop the Panzers and prevent them from exploiting their greatest asset, mobility. The Germans, although understanding the importance of reserves, also understood Clausewitz's dictum that operational reserves lose utility the more general their potential use. By withholding panzer divisions just to have a reserve, the war could have ended much more quickly for the Germans than it did.

THE ARDENNES

In late 1944, the Germans were on the strategic defensive in both the east and west. Hitler knew he had to

do something to regain the initiative so he planned to conduct a major offensive in the west with the ultimate goal of capturing Antwerp and splitting the American 12th Army Group and the British/Canadian 21st Army Group. To accomplish this, the Germans would once again attack through the Ardennes but this time in the middle of winter, with three armies in the first echelon. (Map C) 6th Panzer Army in the north, commanded by Generaloberst der Waffen-SS Josep "Sepp" Dietrich, consisting of four panzer divisions and five infantry divisions would make the main effort attacking vicinity Liege, cross the Meuse River and head for Antwerp. 5th Panzer Army in the center, commanded by General der Panzertruppen Hasso-Eccard von Manteuffel, consisting of three panzer divisions, four infantry divisions, and the Fuhrer Begleit Panzer Brigade would conduct a supporting attack across the Meuse River vicinity Namur, head towards Brussels, and protect the southern flank of the main effort. 7th Army in the south, commanded by General der Panzertruppen Erich Brandenberger, consisting of four infantry divisions would attack to protect the southern flank of the two panzer armies. A fourth army, the 15th, commanded by LTG Gunther Blumentritt would follow behind the 6th Panzer Army and protect the northern shoulder of the salient.

The Allied forces had been on the strategic offensive since the Normandy invasion, had taken an operational pause

to allow supply lines to catch up, and then had resumed offensive operations in November. The 1st Army, commanded by LTG Courtney H. Hodges, was given the mission to seize the Roer Valley dams to facilitate future crossings of the Rhine. MG Leonard T. Gerow's V Corps would attack in the 1st Army center to seize key dams. MG Lawton J. Collins' VII Corps would conduct a supporting attack in the north. MG Troy H. Middleton's VIII Corps was placed in a supposedly quiet sector to rest, refit, and train replacements after the bloody Huertgen forest battle. VIII Corps was given a front of approximately 140 kilometers to be defended by three infantry divisions and one armored combat command.⁴¹

MG Middleton kept one armored combat command and four engineer battalions in reserve and LTG Hodges kept another armored combat command in reserve. Gen Bradley's Twelfth Army Group had no reserves.⁴² General Dwight Eisenhower had been planning to form a reserve which would be used to counter any unexpected situations or exploit any successes and provide him flexibility to react without pulling forces off line. At the time of the Ardennes attack, only two divisions were in Supreme Headquarters Allied Expeditionary Force (SHAEF) reserves, the 82d and 101st Airborne Divisions. The 66th and 75th Infantry and 11th Armored Divisions were scheduled to arrive in theater in December, two infantry divisions were training in the United Kingdom

awaiting equipment but were not due to arrive in theater until after December.⁴³

One of the concerns of the SHAEF G-2 was the location of the German armored reserve. The prevailing belief was that the Germans would use their reserve to counterattack when the Allies had crossed the Roer River and that the counterattack would target the 1st and 9th Armies, but no headquarters could locate the German reserve. Bradley took risk in the Ardennes, but this risk was based upon his belief that the enemy counterattack would be limited since the German Army lacked fuel, equipment, and manpower. This is an example of how the threat (or lack of threat) of reserves will affect a force's operational design. The Allies believed that the Germans could counterattack, but that they would attempt to blunt the Allies penetration into the Industrial Ruhr region. They did not believe that the Germans had the strength to mount a counterstroke. Even though intelligence indicators were present, if Allied intelligence had located the German panzer divisions massing in the vicinity of the Ardennes, then Eisenhower and Bradley would have reinforced the VIII Corps and probably turned forces to attack the enemy forces.

The German counterstroke began early morning on 16 December 1944 with the schwerpunkt attacking into the thinly held Ardennes sector and achieving initial success. Soon after the attack began, Middleton impressed Hodges with

the severity of the situation and convinced him to release his reserve, a combat command which Middleton attached to his northern division so that he would have some armor on his left flank.⁴⁴ Later, Middleton directed his reserve, four battalions of engineers and CCR, 9th Armored Division, to move forward behind the besieged center. Middleton and Hodges had both reacted quickly and used their reserves during the initial stages of the battle.

Bradley was with Eisenhower when news of the attack filtered in at SHAEF headquarters. Eisenhower suggested to Bradley that he divert the 7th Armored Division from the 9th Army in the north and the 10th Armored Division from Patton's 3rd Army in the south to 1st Army. Bradley directed this and 1st Army obtained two fresh armored divisions to assist in halting the penetration.

Less than a day and a half after the attack began, Hodges went back to Bradley with a request for the SHAEF reserve. The official history states that, "Eisenhower listened to Bradley and acceded, albeit reluctantly;...", and Eisenhower provided the SHAEF reserve to Bradley with orders for it to go to VIII Corps.⁴⁵ Again we see major commanders promptly releasing their only reserves when needed. After Eisenhower released his reserve, all further reinforcements would have to come from units already in the field. The two divisions, under XVIII Airborne Corps, had little organic transportation, but could parachute in if

required. The Communication Zone (COMMZ) produced enough trucks to transport both divisions to the fight. Tactically, as the battle progressed, the operational commanders directed units from less threatened areas to move to the area of penetration and stop the Germans by a combination of defense and limited counterattacks.

While making the tactical decisions to halt the Germans east of the Meuse River, Eisenhower was looking ahead to deliver a decisive operational blow which would halt the German drive in their tracks and facilitate future offensive operations. He envisioned a large counterattack with several divisions. Eisenhower believed, "That by coming out of the Siegfried (Line) the enemy had given us a great opportunity which we should seize as soon as possible."⁴⁶ Patton was directed to counterattack to the north with three divisions on 22 December and follow up with more forces six days later. (Map D) Patton had anticipated the German offensive and since his staff had already prepared plans he was able to execute the new mission with little problem. He turned 3rd Army 90 degrees and attack north. The advance was successful, Bastogne was relieved, and the German counterstroke halted.

American commanders demonstrated the mental agility required to shift forces, to halt and counterattack advancing enemy forces. The SHAEF reserve was only two regular infantry divisions, but the mobile force structure

allowed the operational commanders to move forces from less threatened areas to the Ardennes and, as Russell Weigley has written, "The American Army that raced across France in the summer of 1944 and across Germany in the Spring of 1945 was the most mobile in the world, and in those races its mobility served it well."⁴⁷ The Allies were also on the offensive at the time of the German counterstroke and since they were not threatened in all areas, were able to shift forces quickly. Eisenhower did not husband his reserves during the initial days of the battle even though the situation was not clear and this aided First Army in halting the penetration. He was not afraid to change plans and take advantage of opportunities as evidenced by shifting 3rd Army 90 degrees and attacking to relieve Bastogne and St. Vith.

From these historical examples, the following lessons learned apply to operational reserves: 1) During offensive operations, reserves should be used to reinforce the main effort; 2) An operational commander who has an operational reserve must not husband that reserve at the expense of the battle; 3) If a commander does not have the forces to form a reserve, a consideration is to pull it from less threatened sectors; 4) Reserves should not be employed piecemeal, they should be concentrated at decisive points; 5) The threat of reserves can cause an opposing force to design its operations to counter the perceived threat; 6) Reserves

should not be constituted or reconstituted at the expense of winning the battle.

DOCTRINE

FM 101-1-5, Operational Terms and Symbols, defines reserves as, "that portion of a force withheld from action at the beginning of an engagement so as to be available for commitment at a decisive moment," and further defines operational reserves as, "a reserve force established within a corps or higher formation for the execution of a specific operation."⁴⁸ There is no real difference in the definitions, except the distinguishing phrases: "commitment at a decisive moment" and "execution of a specific operation." Once a reserve is committed, whether it is strategic, operational, or tactical, it enters the tactical battle. What makes a reserve different is who employs it and how it is employed.

FM 100-5 emphasizes the need for a reserve at the operational level. It states that a reserve "is the commander's principal means of influencing the action decisively once the operation is under way," and goes on to say,

The reserve reinforces success in the attack or maintains attack momentum. The reserve prepares for a number of specific contingencies which may arise during the attack. It is positioned near the area in which it is most likely to be employed and is re-positioned as necessary to assure it can react promptly.⁴⁹

If the situation is vague, commanders should commit the reserve when "a gap, a flank, or a weakness appears."⁵⁰ This indicates giving reserves general contingencies for planning purposes and then remaining flexible and committing them once the enemy situation becomes clearer. The doctrine seems to be in complete disagreement with Clausewitz, but closer examination shows that FM 100-5 updates Clausewitz. When Clausewitz wrote his book, forces were as fast as horse or foot. Mobility has changed the nature of war and given commanders greater flexibility in how they employ reserves at all levels. If the situation is vague, holding the reserve until the situation clears just makes good sense, but since doctrinally commanders always plan for a main effort, the reserve should support that effort. This sounds confusing, but it is not. Even though the situation is vague, a commander assigns an initial main effort, but shifts it if the situation changes. So goes the reserve. Once the enemy main effort is located, the commander can shift his main effort and commit the reserve as needed. Commanders and forces must be flexible enough to do this. The Ardennes demonstrated that an army could turn 90 degrees, in winter, conduct a long road march, and still fight a major battle.

MISSIONS OF OPERATIONAL RESERVES

There is always the possibility of accident, of some flaw in materials, present in the general's mind: and the reserve is unconsciously held to meet it.

T. E. Lawrence⁵¹

The purpose of an operational reserve during offensive operations is to reinforce the main effort.

FM 100-5 states that,

Reserves are positioned to weight the main effort. They exploit success, reinforce or maintain momentum, deal with enemy counterattacks, provide security, complete the destruction of enemy forces, secure deep objectives, or open the next phase of a campaign or major operation by seizing objectives beyond the defended area.⁵²

Operational commanders sequence battles to accomplish strategic aims, and the reserve helps to do this.

Reinforcing the main effort also supports the law of simultaneous force. The Germans in 1940 took great risk by attacking through the Ardennes with all their armor forward and retaining only regular infantry in reserve, but by selecting their main effort and reinforcing accordingly they were able to decisively overwhelm the French. Slim had selected the decisive point during the Irrawaddy battle at Meiktila. When needed, he did not hesitate to commit his reserve to reinforce the main effort and secure the decisive objective.

The battle of the Ardennes demonstrated that commanders can remain flexible and agile while either retaining a small reserve or pulling units from the line to constitute a reserve. With a mobile force, operational

commanders can read the battlefield and shift the main effort as needed. Today both ground and air mobility have provided the operational commander greater flexibility for the employment of reserves, but this still does not reduce the importance of Clausewitz's law of simultaneous force. The danger remains that if operational commanders attempt to keep the mission of the reserve too general, they will husband the reserves because of indecisiveness and failure to read the battlefield correctly. A commander's initial plan should commit the reserves to the main effort, and ensure that it is mobile enough to respond to situations as they change.

Once an operational commander commits the reserve should another reserve be reconstituted? Certainly some theorists believe so, but neither the Germans in 1940 nor Slim attempted to reconstitute after commitment. Slim went to his higher headquarters and asked for more forces, but once turned down he did not pull forces from the battle to just maintain a reserve. Again the law of simultaneous use of force applies at the operational level. Even though a commander may lose flexibility by not having a reserve, the battle may be lost if the commander attempts to pull forces to reconstitute it. The commander must appraise the situation and if forces can move from less threatened sectors as in the Ardennes, then a reserve may be

reconstituted. But a reserve should never take priority over winning a battle.

CONSIDERATIONS FOR EMPLOYMENT OF OPERATIONAL RESERVES

The reserve is a club, prepared, organized, reserved, carefully maintained with a view to carrying out the one act of battle from which a result is expected - the decisive attack.

Ferdinand Foch⁵³

The first consideration of a reserve is its mobility. An operational reserve is built around the forces available, but it must have armor killing weapons and be as mobile as possible. The most effective reserve is a force which is completely mechanized. If only regular infantry is available, then planners must provide them transportation. During offensive operations regular infantry should be placed in less threatened areas and armor units pulled from line to use in the reserve role.

Another consideration is the type mixture of combat maneuver forces. Reserves should have both tanks and mechanized infantry. The tanks are necessary for their shock effect and fire power. The infantry perform missions such as clearing obstacles, securing bridgeheads over water obstacles, protecting shoulders of penetrations, and dealing with enemy infantry forces. The actual numbers of tanks versus mechanized infantry depends upon the enemy situation and terrain.

A third consideration is the combat support available for a reserve. Doctrinally, cannon field artillery does not

remain in reserve, so all cannon artillery units will fire in support of committed units during battle. A reserve will probably not have indirect fire support until committed. As there is the potential for disaster if the reserve is committed in a sector where the artillery cannot reach, or the reserve cannot communicate with supporting battalions, planners must ensure that the reserve receives fire support when employed. Operational commanders may retain some long range systems such as Multiple Launch Rocket System (MLRS) and Army Tactical Missile System (Army TACMS) in reserve. Reserves must also receive their slice of Air Defense Artillery (ADA) and Engineer support. Planners must ensure that if reserves do not have assigned support prior to commitment, that linkup occurs prior to battle.

The fourth consideration is the role of Air Force and Army Aviation as controlling the air space over the reserve is critical to its proper and timely employment. Though the operational commander will not normally retain air assets in reserve, the air dimension has flexibility to react quickly to any new missions thus allowing the operational commander to shift air assets in support of the reserve upon commitment. Air power could also support economy of force missions giving the commander the capacity to constitute reserves from less threatened sectors. However the commander decides to use air, it provides him the agility

and flexibility to apply combat power at a decisive point and is an integral part of a reserve.

The fifth consideration for employment is logistics. A reserve cannot be tied to a logistics tail since when it is committed, it must move unencumbered and quickly. All units have organic support, but for a reserve to be effective it cannot wait for its support to catch up. Units equipped with M-1 tank and M-2 infantry fighting vehicles require extensive logistics support particularly fuel and ammunition. If a brigade uses its own organic support, these vehicles must be integrated somewhere in the march columns so that they can resupply the combat elements. Moving on limited routes with combat service support (CSS) vehicles in the march columns reduces the amount of combat power projected forward. One way to resolve this is for either the higher headquarters or the unit through which the reserve is passing to position logistics forward so that the reserve is refueled and resupplied prior to battle. This keeps the organic support off the roads and allows the reserve to enter battle with a full basic load. Logistics planners could also position mobile Corps Support Command (COSCOM) assets forward to support any forces on an area basis. Any reserves moving through the area would receive supply and maintenance support from the COSCOM units. These two solutions would allow the reserve to move quickly and

unencumbered with a supply tail. The organic CSS vehicles could move forward later.

The sixth consideration is size. The battles along the Chir River 7 - 19 December 1941 provide valuable insight on how a small reserve can effectively defeat much larger forces. General Hermann Balck, commander of the Eleventh Panzer Division, continually defeated large concentrations of Russian tanks by striking them in the flanks and rear while they moved. His striking force was only 25 tanks.⁵⁴ He was on the defense and would strike the enemy when they least expected it and on terrain of his choosing. Marshall M. N. Tukhachevskii believed in an all arms battle along with the principle of simultaneity. A mass army operating on a broad front would require enough units to pin enemy forces along the front and inflict high casualties, and sufficient reserves to mass at the decisive point and time.⁵⁵ The size of the reserve will depend upon its mission as envisioned by the commander, but in offensive operations it must be large enough to decisively influence battle. It must have the capacity to go beyond the forward line of troops (FLOT), accomplish its mission, and hold what it has gained. It must have the capability to transition to the defensive and defeat enemy counterattacks.

The seventh consideration for employment of an operational reserve is its location. During offensive operations it must be placed where it can best support the

main effort, its first priority, but retain the flexibility for use elsewhere if needed. With the lethality of modern weapons, protection plays an important part in determining locations for the reserves. It should be far enough to the rear to avoid enemy artillery interdiction prior to employment. The reserve is most vulnerable when massed, either in assembly areas or prior to striking. To protect against detection and fire, the reserve could be divided into smaller units and then dispersed to mass later at a decisive point. Locations must offer protection and sufficient roads for movement.

The final consideration is how to employ the operational reserve, either piecemeal or massed for one concentrated effort. The French in 1940 did not understand how to use armor. They employed their armor piecemeal, could not coordinate their efforts, and were defeated. The Germans on the other hand massed their armor at decisive points, punched through the French defenses, and defeated French forces. A commander can employ his reserves however he so desires, but historically the best method is to mass the forces for one killing blow.

CONCLUSIONS

The great secret of battle is to have a reserve. I always had.
Wellington⁵⁶

During offensive operations an operational commander must consider whether or not to retain reserves. Theorists

generally agree that reserves at all levels are important. Clausewitz, provides critical insight as to the retention of operational versus tactical reserves. Two key lessons for operational commanders to remember during offensive operations, is that a reserve should have specific missions, i.e. to reinforce the main effort, to attack deep to destroy enemy reserves, etc, and at the operational level, commanders must apply force simultaneously to defeat enemy forces.

History has demonstrated the importance of operational commanders retaining reserves, but not at the expense of the battle. Even though the Germans in 1940 had a reserve, it was not as mobile as the lead echelons. They had decided to lead with their panzer divisions and they penetrated the French along a narrow sector. The follow on infantry divisions would protect the shoulders of the penetration and lines of communications. The Germans took risk by not maintaining a mobile reserve, but they did not violate the simultaneous use of force and were victorious.

The U.S. doctrine today is right on the mark when discussing reserves at the operational level. Reserves are the commanders principal means for influencing the battle once it begins. A commander should use the reserve to support the main effort, but when the enemy situation is vague, the reserve will have more general missions and must

remain flexible. The Americans in the Ardennes demonstrated the capacity for this type of action.

A commander must look at the forces available, mission, and enemy situation when determining whether or not to form a reserve. The commander must never sacrifice the battle just to form a reserve. One of the new assets available to the commander is the Combat Aviation Brigade (CAB). Although this force cannot hold ground and is subject to the vagaries of the weather, this force can move great distances quickly, and provides the commander the capability to mass large amounts of firepower. Commanders should seriously consider use of the CAB as a reserve force or use it to reinforce a sector to pull a ground force for use as a reserve. A ground reserve must be mobile with a preponderance of tank killing weapons.

Finally, once a commander decides to retain a reserve, he must have the "strength of character" to follow through with the plan for employment. If the commander vacillates or becomes indecisive, the opportunity to commit it may be lost. At the same time, the commander must retain the agility to employ it elsewhere as opportunities present themselves.

NORTHWESTERN EUROPE, 1940
CAMPAIGN IN THE WEST, 1940
Disposition of Opposing Forces and
German and Allied Plans for the
Battle of Flanders

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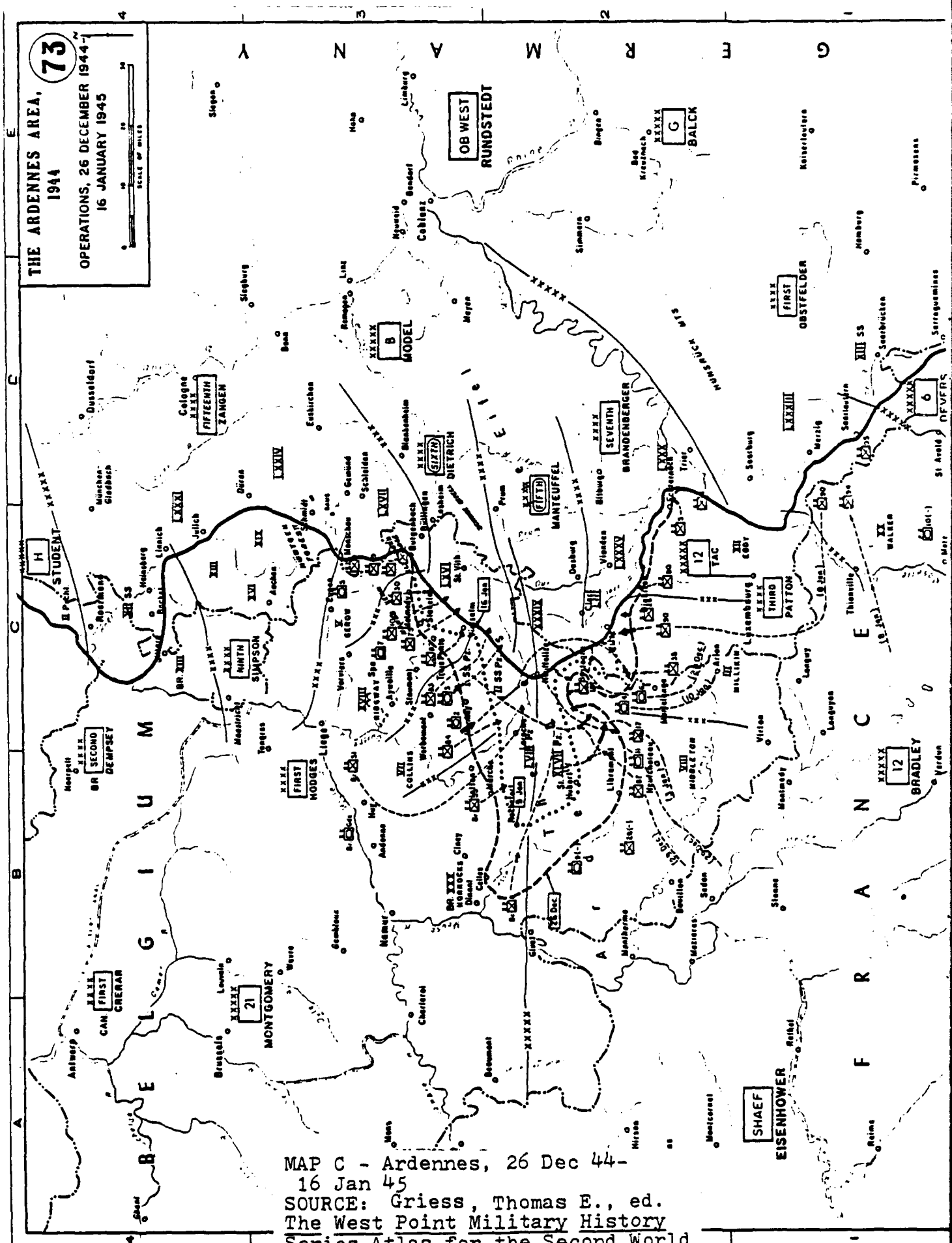
MAP A- Battle of Flanders
SOURCE: Griess, Thomas E., ed.
The West Point Military History
Series Atlas for the Second World
War, Europe and the Mediterranean
(New Jersey: Avery Publishing
Group Inc.)

THE ARDENNES AREA, 1944
THE INITIAL GERMAN ATTACK AND OPERATIONS, 16-25 DECEMBER 1944

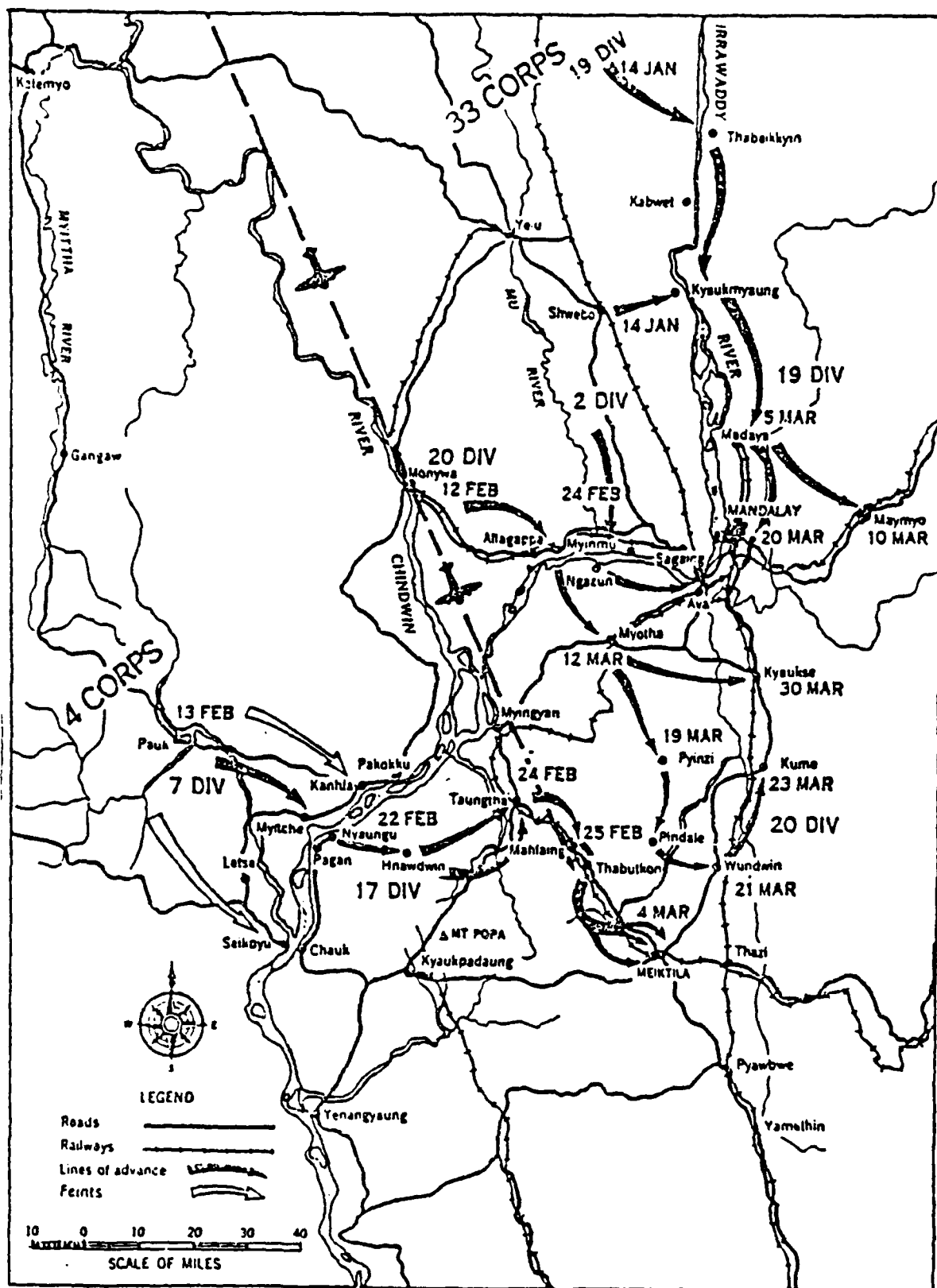
MAP B- Ardennes, Initial German Attack
SOURCE: Griess, Thomas E., ed. The West Point Military History

MAP B- Ardennes, Initial German
Attack
SOURCE: Griess, Thomas E., ed.
The West Point Military History
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War, Europe and the Mediterranean
(New Jersey: Avery Publishing

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THE ARDENNES AREA,
1944
OPERATIONS, 26 DECEMBER 1944 -
16 JANUARY 1945



MAP C - Ardennes, 26 Dec 44-
 16 Jan 45
 SOURCE: Griess, Thomas E., ed.
The West Point Military History
Series Atlas for the Second World
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MAP D - Battle of Central Burma
 SOURCE: Slim, Field Marshal
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2. Ibid., p. 27-28.
3. Romjue, John L. From Active Defense to Airland Battle: The Development of Army Doctrine 1973-1982. (Washington D.C.: U.S. Government Printing Office, 1985) p. 14.
4. Clausewitz, Carl Von. On War. Edited and Translated by Michael Howard and Peter Paret. (New Jersey: Princeton, University Press, 1984) p. 358 and Field Manual (FM) 100-5, p. 91.
5. Field Manual (FM 100-5), p. 91.
6. Welgley, R. F. Eisenhower's Lieutenants. (Bloomington: Indiana University Press, 1981) p. 150.
7. Handel, Michael I., ed. Clausewitz and Modern Strategy. (New Jersey: Frank Cass and Company Limited, 1986) p. 172. During Clausewitz's day, the head of state and army commander were often one in the same. Since the same person determined both the strategic goals and the campaign plan, the distinction between the strategy and operations were blurred. Modern day writers have concluded that when he discussed strategy he meant what we today call operational art.
8. Clausewitz, p. 210.
9. Ibid., p. 210.
10. Aron, Raymond. Clausewitz Philosopher of War. Translated by Christine Booker and Norman Stone. (New York: Simon & Schuster, Inc., 1986) p. 129.
11. Clausewitz, p. 210.
12. Ibid., p. 211.
13. Jomini, Baron De. The Art of War. Translated by Capt. G. H. Mendell and Lieut. W. P. Craighill. (Connecticut: Greenwood Press, Publishers, 1971) p. 133.
14. Simpkin, Richard E. Race to the Swift. (Great Britain: A. Wheaton & Co. Ltd., Exeter, 1985) p. 134.

15. Willoughby, Charles A., LTC. Maneuver In War. (Pennsylvania: The Military Service Publishing Co., 1939) p. 59.
16. Fuller, J. F. C., MG. Armoured Warfare. (London: Eyre and Spottiswoode, 1943) p. 87.
17. Slim, The Viscount, Field Marshal. Defeat into Victory. (New York: David McKay Company, Inc., 1961) p. 378.
18. Ibid., p. 381.
19. Ibid., p. 435-437.
20. Ibid., p. 393-394.
21. Ibid., p. 394.
22. Ibid., p. 387.
23. Ibid., p. 438.
24. Riley Don T. The Evolution Of Operational Art - The Reconquest of Burma, 1943-1945. (School of Advanced Military Studies, Fort Leavenworth, KS., 1987) p. 26.
25. Slim, p. 437-439.
26. Horne, Alistair. To Lose A Battle. (New York: Penguin Books, 1979) p. 195.
27. Many proponents of Clausewitz believe that his concept of the center of gravity means the mass of the forces. The Germans who studied Clausewitz used the *schwerpunkt* to mean the concentration of forces or mass. This became very useful when developing their blitzkrieg doctrine which depended upon rapid shifting of armored forces. *Schwerpunkt*, then, means center of gravity or main effort. For more on the subject see an unpublished article by James J. Schneider and Lawrence L. Izzo entitled "Clausewitz's Elusive Center of Gravity."
28. Horne, p. 195-196.
29. Nelson, John T. Strength Against Weakness: The Campaign In Western Europe, May-June 1940. (School of Advanced Military Studies, Fort Leavenworth, KS., 1987) p. 6.
30. Ibid., p. 8.

31. Shirer, William C. The Collapse of the Third Republic. (New York: Simon and Shuster, 1964) p. 609.
32. Nelson, p.8.
33. Ibid., p.7.
34. Ibid., p.8.
35. Shirer, p. 608.
36. Ibid., p. 247.
37. Nelson, p. 6.
38. Shirer, p. 699.
39. Horne, p. 218-219. The world was stunned with the speed at which the Germans defeated the French who supposedly had one of the most powerful armies in the world. Initial speculation was that the Germans had more and better equipment. After the battle, investigation showed that the forces were nearly equal in equipment and size, but the Germans far exceeded the French in training and doctrine. For more information see The Seeds Of Disaster, by Robert A. Doughton.
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41. Eckert, Gregory M. Operational Reserves in AFCEM Another Look. (School of Advanced Military Studies, Fort Leavenworth, KS., 1986) p. 16.
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45. Ibid., p. 304.
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