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MANEUVER AND THE OPERATIONAL ART

BY

LTC PAUL T. DEVRIES

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Author examines the rule of maneuver in US Army doctrine. He compares the firepower attrition school and the maneuver school. By means of several historical examples, he shows the importance of using maneuver. He concludes by recommending that instruction in maneuver warfare be emphasized in the Army's education and training program.
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US ARMY WAR COLLEGE

INDIVIDUAL RESEARCH BASED ESSAY

MANEUVER AND THE OPERATIONAL ART

BY

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29 APRIL 1982

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The attack had come after a period of considerable tension between the Warsaw Pack and NATO. As predicted by the NATO intelligence agencies, the main effort was made in the North German plain, while a strong supporting attack took place through the Fulda Gap and Hessian Corridor. The US V Corps was hit very hard and grudgingly gave ground. Commander Central Army Group (COMCENTAG) made a very bold decision. He ordered the VII Corps Commander to move one of his divisions north into the V Corps area to conduct a counterattack against the Pact thrust which was advancing along the Bad Hersfeld-Asfeld Autobahn. (Map 1). The division was to be OPCON to the V Corps for the operation and CG V Corps would be responsible for coordination of its employment. VII Corps was ordered to conduct economy of force operations to contain possible enemy advances in that sector. COMCENTAG also directed that a cover and deception operation would be undertaken to convince the enemy that the US division not only was still in its original location but also that it was preparing for a counterattack in the VII Corps sector. The US division was ordered to move north along predesignated routes under strict radio listening silence. The division CG flew north ahead of his unit to be briefed by CG V Corps on his mission. At the Corps Command Post, the Corps Commander emphasized the importance of this attack to the integrity of the V Corps defense and, for that matter, the entire CENTAG defense. He also reiterated to the division commander that his objective was the destruction of the enemy's first echelon. Also if
this operation were concluded successfully, he should be prepared for a rapid return to VIT Corps depending on how the situation in that corps area fared.

The attack was launched at 0600 hours on D+6. (Map 2) The US division fell on the left flank of the first echelon of the attacking Combined Arms Army. Using attack helicopters and USAF close air support, the leading elements of the division brushed the Soviet flank guard aside and struck a tank division in the flank. Progress was rapid as the enemy attempted to reorient on the new threat from the south. The combination of the attack helicopters and the concentrations of US armor proved devastating. The counterattack was progressing so well that COMCENTAG offered CG V Corps his reserve to attempt to annihilate the Soviet force. Subsequently, the 1st echelon of the Combined Arms Army was cut off from its 2d echelon and became encircled. The 2d echelon already had suffered heavy casualties and now requested permission to withdraw. By 0800 D+7 the 1st echelon's encirclement had been completed and many units had begun to surrender. The Soviet commander at this point made a serious blunder by reinforcing failure. More and more enemy units attacked into the chaos and were destroyed piecemeal. Pressure all along the CENTAG front began to temporarily diminish and COMCENTAG ordered his units to reorganize and prepare for further PACT attacks. The US division executing the successful counterattack was ordered north to the German I Corps for operations in NORTHAG. Former World War II German generals Balck and Von Mellenthin commenting on a similar action held that small forces skillfully led can win battles against large forces if the small force is synchronized and the large force is disorganized. They made it clear that this is the essence of successful operations. Their experience told them that it was not
difficult to create such opportunities - that the Russians were pecu-
liarily susceptible to disorganization when confronted with new and
unexpected situations.¹

The description above is intended to focus this article on a ques-
tion which has been discussed more and more since the publication of FM
100-5 Operations in July 1976. Since that time, US Army doctrine has
been accused of being firepower-attrition oriented rather than maneuver
oriented. Theoretically both doctrines employ the same elements, fire
and maneuver, but firepower-attrition doctrine uses maneuver primarily
as a way to transport and position firepower so that firepower can
physically destroy the enemy by attrition. The object of military
action here is physical destruction of the enemy. This is not neces-
sarily the object of maneuver doctrine, where firepower is used only
when necessary to create opportunities for maneuver. Maneuver doc-
trine's object is to break the spirit and will of the enemy command by
creating surprising and dangerous operations or strategic situations.²

The US Army has come under strong criticism by a group of civilians
who consider themselves "Military Reformers."³ These reformers are made
up of some members of Congress as well as members of academia. Also,
while not considered reformers themselves several officers have examined
Army doctrine from within and found it unable to sustain the challenge
"to fight outnumbered and win!"

Edward N. Luttwak, a Georgetown University professor, espousing the
need for a maneuver doctrine, points out that "It must always be the
human factor that is most important, for war after all is decided to a
far greater extent by the moral and intangible factors than material."⁴

William S. Lind, legislative aide to Senator Gary Hart (D-Colo), a
staunch advocate of maneuver doctrine emphasizes that:
The goal is destruction of the enemy's vital cohesion-disruption, not piece-by-piece physical destruction. The objective is the enemy's mind, not his body. The principal tool is moving forces into unexpected places at surprising high speeds. Firepower is a servant of maneuver, used to create openings in enemy defenses and, when necessary, to annihilate the remnants of his forces after their cohesion has been shattered.\textsuperscript{5}

Steven L. Canby, professor University of London, cautions that:

In armored warfare major attacks are not made across the front in the manner of the Western Allies in World War II; instead the bulk of the front is held by deploying secondary, economy of force units to deceive and to pin down opposing forces while the main attack is concentrated in one or more narrow sectors, to achieve a deep penetration and subsequent exploitation in the defense rear areas.\textsuperscript{6}

Colonel Wayne A. Downing, US Army, Brigade Commander, 1st Armored Division, stated:

A maneuver-oriented doctrine is a war-winning strategy for the US Army. Such doctrine acknowledges the realities of the 1980s and beyond and capitalizes on inherent American strengths of flexibility, adaptability and originality.\textsuperscript{7}

Brigadier General Robert G. Wagner, US Army, former commander 11th Armored Cavalry Regiment, made the key point that:

The debate over these two styles of warfare is critical because doctrine must be translated through training into an ability to win battles. If the tenets on which our training is based are wrong, then we face the dismal prospect of having prepared improperly for a future conflict. Training can hardly be changed in the midst of a fast paced fire-fight after we have found that the doctrinal foundations of our training are not sound.\textsuperscript{8}

Before we proceed we must define maneuver. The final draft of the new FM 100-5 Operations dated 4 September 1981 defines maneuver as placing the enemy in a position of disadvantage through the dynamic application of combat power. It goes on to explain that maneuver is the dynamic element of combat power. It contributes significantly to sustaining the initiative, to exploiting success, to preserving freedom of action, and to reducing vulnerability. The object of maneuver is to
concentrate forces in a manner designed to gain the advantages of surprise, position, and momentum which enable small forces to defeat larger ones. It is the means for achieving results that would otherwise be more costly in men and materiel. At all levels, successful application of this principle requires not only fire and movement, but also flexibility of thought, plans and operations, and the considered application of the principles of mass and economy of force.\textsuperscript{9}

The origin of maneuver doctrine is not recent. It was the basis for the successes of both Alexander and Genghis Khan. It was first described in the writings of the 18th Century author generals Saxe, Bourset and Guibert. It has been expanded since by military writers such as J.F.C. Fuller, Heinz Guderian and more recently in the unpublished works of Colonel John Boyd, USAF (RET), father of the energy management approach to air combat tactics. Its theory is equally applicable to regular or guerrilla warfare, to tactics or to strategy and to air-to-air or ground conflict.\textsuperscript{10}

Has the US Army officially espoused a firepower-attrition doctrine? If so, is this the correct doctrine for the US Army? In the next several pages we shall examine doctrine in theory and practice.

The US Army has always officially maintained a doctrine of fire and maneuver in modern mechanized warfare. An examination of the US Army Field Manual FM 100-5 Operations from 1941 until the present confirms that fire and maneuver has always been included as doctrine. However, it is significant to note that whereas maneuver was listed as "an essential ingredient of combat power" in the 1968 edition of FM 100-5, it was only mentioned in passing in the 1976 edition. Also the Principles of War, included in every edition of the manual since 1949, were excluded from the 1976 edition. While not stated explicitly, it appears that the
authors of the 1976 edition felt that the lethality of the modern battlefield would preclude effective maneuver in modern warfare especially in Europe. This is particularly ironic as much of the data utilized in the 1976 edition was taken from the 1973 Arab-Israeli War where maneuver provided the Israeli’s with decisive results. So while maneuver was not officially taken out of the US Army tactical doctrine, it can be said that it just wasn’t emphasized. This becomes understandable in the light of our recent combat experience in Vietnam where we possessed a clear superiority in firepower over the North Vietnamese Army (NVA) and Viet Cong (VC) forces. Also, it is key to recall here that because of strategic and political considerations, the ground strategy remained that of a gigantic mobile defense\(^1\) where the initiative was usually with the enemy and any maneuver was carried out as a reaction to his maneuver. His tactics attempted to compensate for his relatively weaker firepower. Maneuver was key to all his operations. He rarely accepted battle in unfavorable situations and only accepted decisive combat under exceptional circumstances.\(^2\) A classic illustration of his maneuver at the operational level was the Tet campaign of 1968. (Map 3). Without warning, NVA and VC battalions infiltrated in and around all South Vietnamese major cities for an attack which was timed to take place on 31 January 1968, the Vietnamese New Year’s Day. Although initially achieving tactical and strategic surprise, the enemy forces were defeated because of the superior US battlefield mobility which facilitated rapid counterattacks. Nevertheless over a month after the Tet offensive, US and South Vietnamese forces were still mopping up pockets of enemy resistance. Although initially outmaneuvering US forces, the NVA and VC forces suffered serious losses because of the superiority of US firepower and mobility. It is also significant to point out that at the operational
art level i.e. Corps, Army and Army group/front, the NVA habitually outmaneuvered US forces. This was not always the case at the tactical level. Also this may not have been the case if US forces had been allowed to move into Cambodia and Laos without restrictions. This discussion of maneuver and mobility also brings out the requirement to emphasize that they are not the same. Mobility is the means by which we execute maneuver. Only when mobility is applied with the aim of inflicting command paralysis on the enemy is it translated into maneuver. Furthermore a key to understanding maneuver war is to realize that not all movement is maneuver. Maneuver is not a matter simply of moving and acting consistently more rapidly than your opponent. It is not a way of moving but a way of thinking.

Therefore, the idea of fighting outnumbered and winning seems ludicrous without a heavy reliance on maneuver. We cannot match firepower with the Soviets so we must be smarter to establish combat ratio's favorable to us at decisive points. Proper positioning of forces in relation to the enemy frequently can achieve results which otherwise could be achieved only at a heavy cost in men and materiel.

Modern US Army doctrine has identified certain factors which increase combat capabilities. These are referred to as "Combat Multipliers." It is the opinion of this author that maneuver is the greatest of the combat multipliers. The battle of Cannae in 216 B.C. illustrates this superbly. The Carthaginian Army, 50,000 strong, under Hannibal faced a Roman Army of 72,000 and commanded on alternate days by Consul Varro or Consul Paulus. Hannibal chose to engage the Romans in battle when Consul Varro was in command. Since Varro was the more aggressive of the Roman commanders, he was more suitable to Hannibal's plan. This
plan first sought to deprive the Romans of cavalry protection on their flanks and then maneuver them into a position favorable to the Carthaginians. Hannibal then planned to destroy the Romans by attacking with all his forces. (Map 4). Hannibal divided his forces into an advanced weak center and strong flanks with the latter resting on obstacles. Cavalry was posted on both flanks with the larger force under Hasdrubal on the left flank. The Carthaginian center was to withdraw slowly and deliberately before the Roman onslaught. The wings of the Carthaginian formation were to remain in position. Hasdrubal was to destroy the Roman cavalry on the right flank, then circle the formation and destroy the Roman cavalry on the left flank which was opposed by a weak Carthaginian cavalry force. (Map 5). The plan succeeded. Hasdrubal destroyed or put to flight the Roman cavalry of both flanks. The Carthaginian center withdrew slowly and in good order, drawing after it the mass of the Roman Army, ever increasing in density as Varro rushed reinforcements to the center in an attempt to exploit the Carthaginian weakness he perceived there. With the outcome of the battle focused on this decisive point Hannibal ordered his withdrawing center to attack. At the same time the two Carthaginian wings wheeled in on the Roman flanks and Hasdrubal's cavalry struck at the Roman rear. The result was chaotic. Massed so closely the Romans could scarcely use their weapons and thus were easily slaughtered by the Carthaginians. Some 60,000 Romans perished with a loss of only 6,000 Carthaginians. By careful planning, maneuver was used to destroy a superior force. Cannae offers many classic military lessons. But its example of how maneuver becomes a combat multiplier is without peer. At Cannae Hannibal fought outnumbered — and won! It also points out that maneuver is a function of the skill of the commander and intelligence. Hannibal was a skillful com-


BATTLE OF CANNAE (Opening Phase)
BATTLE OF CANNÆ (Final Phase)
mander and he had excellent intelligence concerning the Romans and their commanders Paulus and Varro.

A superior understanding of maneuver at all levels was the factor which allowed the Germans to always be stronger at the decisive point (Schwerpunkt). A classic example of the above was the German invasion of France on 10 May 1940. (Map 6). After having fixed a large portion of the French Army behind the Maginot Line defenses, Germany massed seven-tenths of its total armored strength opposite the Ardennes Forest where there were deployed only a frail screen of the French Army's weakest divisions. The German invasion of Belgium and Holland drew the British and French mobile reserves northeast into Belgium. Then to the amazement of the allied high command, the powerful German thrust came through the hitherto thought to be impenetrable Ardennes. It brushed aside the covering troops, roared to the Meuse River, crossed and sped on to the channel. By 21 May the German armor had cut all communications between allied forces in Belgium and those to the south. Allied counterattacks proved ineffective. Allied forces in the north withdrew to the Dunkirk area and were evacuated beginning on 29 May. On 28 May the Belgian Army had surrendered. The decisive thrust of the German armor had split the allied forces and trapped those in the north. The withdrawal of the surviving allied forces from Dunkirk freed the German Army to concentrate against the French Army to the south. From a military point of view, the German campaign in the west is a masterpiece of modern mobile warfare. Colonel John Boyd in his discussion on "Patterns of Conflict" points out that:

The idea was not only to understand their adversary's strength weakness, moves, and intentions, but also to shake them and to cause them to do the wrong thing. The idea of initial surprise. If they have done all these things, they are going to
get it. They not only want to get that initial surprise but to keep that pace going very rapidly through fluidity of action as we have already talked about, so they can generate that surprise over and over again. The idea being to slam that strength against weakness, start generating that initial doubt and uncertainty, very quickly transforming it into pain and chaos, the big prisoner of war bag.19

During the summer of 1950 while the Eighth US Army and Republic of Korea forces were fighting for their existence in the Pusan Perimeter, General MacArthur was preparing a bold stroke. (Map 7). On 15 September the 10th US Corps conducted an amphibious landing at Inchon. Simultaneously forces inside the Pusan Perimeter attacked to linkup with the amphibious force. On 26 September the converging forces met just south of Seoul and effective North Korean Army (NKA) resistance collapsed. All or part of eight NKA divisions were cut off by this advance, and most of the other divisions had to abandon the greater part of their tanks, heavy weapons, and supplies as they attempted to escape. The NKA had ceased to exist as an effective fighting force. Apparently its commanders had never considered the possibility of defeat and had consequently made no plans for a withdrawal. When one became necessary, it quickly degenerated into a rout and a flight for survival.20

This operational maneuver required great risk by MacArthur. Forces inside the Pusan Perimeter initially had to conduct economy of force operations to free other forces for the landing. Subsequently a superior combat ratio was established by Eighth Army forces at the decisive point to effect the breakout to the northwest. The overall effect on the North Koreans was to destroy their center of gravity and cause the coherence of their entire operation to crumble.

The 1976 version of FM 100-5 states that "the skillful commander substitutes firepower for manpower wherever he can do so."21 It also states "Firepower saves manpower and thus saves lives."22 Furthermore
MAP 7 - THE INCHON LANDING AND THE BREAKOUT FROM THE PUSAN PERIMETER

South Korea
- Internal administrative boundary
- National capital
- Principal administrative capital
- Railroad
- Road

Sea of Japan
Yellow Sea

15 Sep 1950
it seems to beget the question does maneuver warfare cost more casualties? Casualty figures for the 1940 German campaign in the west were 500,000 allies killed and 3,000,000 captured. German losses were 156,000 of which 35,000 were killed.23 These were phenomenal results by anyone's standards. In the first three weeks of combat for the 3d US Army from 1-21 August 1944, it had traveled faster and farther than any US Army in history, liberating Brittany and almost sealing the German forces inside the Falaise Pocket until halted by General Bradley.24 US casualties for this period amounted to 1,713 killed, 7,928 wounded, 1,702 missing, and 4,286 non-battle for a total of 15,629. Estimated German causalities inflicted by the Third Army during the same period were 11,000 killed, 49,000 prisoners and 48,000 wounded for a total of 108,000.25 During the initial phases of Operation Barbarossa 22 Jun- 1 Sep 1941, German General Von Bock, commanding Army Group Center, captured vast numbers of Russians in two giant double envelopments. (Map 8). In the battle of the Minsk Pocket Army Group Center accounted for 300,000 prisoners, 2,500 tanks, and 1,400 guns, while in the process destroying four Soviet armies. Subsequently in the battle of the Smolensk Pocket, 310,000 prisoners, 3,200 tanks and 3,100 guns were accounted for. By 8 July the German Headquarters had reckoned that they had destroyed 89 of 164 existing Russian divisions.26 Of note is that the Germans and their allies were outnumbered by the Russian's 164 divisions to 113.27 However, what remains critical is the number of divisions which were committed by both sides at the decisive point (Schwerpunkt). This is what decided the outcome of the battle, not the opponents total inventory of divisions.

The new FM 100-5 restores doctrinal emphasis on maneuver. US Army
MAP 8 - BATTLES OF THE MINSK AND SMOLENSK POCKETS -
THE BIG PRISONER OF WAR BAG
doctrine balances firepower with maneuver, stresses combined arms warfare, and requires cooperation with sister services and allies. It emphasizes tactical flexibility, speed, mission orders, the initiative of subordinates, and the spirit of the offense.\textsuperscript{28}

FM 100-5 goes on to point out that opposing forces on the next battlefield will rarely fight across orderly, distinct lines. It holds that the US Army must be prepared to fight campaigns of considerable movement complimented by intense volumes of fire. Massive troop concentrations or forces which are immensely destructive will make some penetrations by both combatants nearly inevitable and linear warfare will most often be a temporary condition at best. Points of decision or decisive points (Schwerpunkt) are mentioned as those places where combat power must be concentrated.\textsuperscript{29} Additionally, the new manual concludes that synchronization of operations is necessary to achieve maximum combat power at the point of decision. Synchronized, violent execution is the essence of decisive combat. It is the result of an all-pervading unity of effort throughout the force. Every action of every element must flow from an understanding of the higher commander's concept. In another sense synchronization applies to combined arms which are synchronized in time and space to achieve complementary and reinforcing efforts to greatly magnify their potential individual impacts on the enemy. Operations are conceived with a follow-through firmly in mind. Specific provisions are made in advance for the resolute exploitation of opportunities that will be created by tactical success.\textsuperscript{30} The manual goes on to address how superior combat power is generated under the section entitled "The Dynamics of Battle." Here the commander's skillful combination of the elements of maneuver, firepower, protection and intelligent leadership in a sound operational plan is emphasized.\textsuperscript{31}
FM 100-5 calls maneuver, the dynamic element of combat, the means of concentrating forces in critical areas to gain the advantages of surprise, position and momentum which enable small forces to defeat larger ones. Its effective use demands battlefield mobility, knowledge of the enemy and terrain, effective command and control, flexible operational practices, sound organization, reliable logistical support, and much more. It requires imagination, audacity, competence, independence and willingness to take risks in leaders and discipline, coordination, speed, a high state of training and logistical readiness in units. Effective maneuver protects the force and keeps the enemy off balance, continually poses new problems for him, renders his reaction ineffective and eventually leads to his collapse. Effective maneuver maintains or restores the initiative. It is the means of positioning forces on the enemy flanks and rear over indirect approaches which avoids his greatest strength, exposes his critical forces to destruction, and strikes him where he is least prepared. It forces the enemy to react and restricts his freedom of action. Since great numerical advantages are rare in war, the attacker will normally economize in large areas in order to develop local superiority at the point of his main effort. The attacker concentrates quickly and strikes hard at an unexpected place or time to throw the defender off balance. Once the attack is underway, he must move fast, press every advantage aggressively and capitalize on every opportunity to destroy the enemy's forces or the overall coherence of his defense. An example of the above occurred in the 1973 Arab-Israeli war (Map 9) where the Israeli's, after defeating the Syrians, conducted economy of force operations in the Golan Heights area and concentrated their combat power against the Egyptian forces in the Sinai
desert. The Israeli forces in the Golan area shelled Damascus with long range artillery to give the impression they were preparing to seize that city while sizeable Israeli forces moved south. Also while hostilities did not break out between Israel and Jordan, Israel maintained light forces in an economy of force role on the Jordanian border throughout the conflict with Syria and Egypt.

It should be pointed out here that it is far easier to employ maneuver at the tactical level than at the operational art level. The larger the unit, the greater becomes the risk. Thus in our hypothetical NATO example, COMCENTAG took an enormous risk by ordering a VII Corps division to the V Corps area. However, he took the necessary steps to conduct economy of force operations to minimize this risk.

At both the operational and tactical levels, the object of maneuver is to concentrate strength against enemy weakness and thus facilitate the destruction of his forces. At the operational level maneuver is characterized by the employment of corps and divisions to envelop, turn, penetrate or block enemy forces. After concentrating against the Egyptian forces in the Sinai, Israeli forces hurled their strength at an Egyptian weakness – the boundary between the Egyptian Second and Third armies. Here the Israeli's forced a crossing of the Suez Canal which subsequently led to the encirclement of the Third Army, and the threat of its destruction. (Map 10).

The US Army has reaffirmed its belief in maneuver in its latest edition of FM 100-5. The publication of this new profession of doctrine should put an end to the arguments of the reformers both inside and outside the Army. Nevertheless, the question of whether the US Army has had a firepower-attrition doctrine or not will continue to be discussed. Some would say that all warfare is firepower-attrition oriented. Real-
MAP 10 - ISRAELI'S CONCENTRATE FORCE AT THE DECISIVE POINT TO ACHIEVE SUCCESS

EGYPT

El Quantara

Ismailia

Sinai Peninsula (Occupied by Israel)

ISRAELI BREAKTHROUGH
- 20,000 men
- 500 tanks

Suez Canal

Great Bitter Lake

To Cairo

Adabiya

Egyptian Third Army

Gulf of Suez

0 10 20 mi
istically, it must be accepted that when an army is outnumbered, maneuver becomes absolutely essential to success in battle. Some skeptics believe that because of the amount of firepower available on the modern battlefield, maneuver is impossible. 36 Others hold that it is too complicated to maneuver large units on the modern battlefield and that current levels of training prohibit it. 37 Presently the US Army is fielding many new weapons systems. The presence of these new systems on the battlefield demands we train our soldiers to employ them skillfully. We must optimize our tactics for these new weapons. The experience of the past three decades amply demonstrates that we cannot simply erect a new doctrine, organize new formations and procure new equipment without an intense effort to redirect the thinking of individuals in the Army. 38 There is more to the problem of instilling the idea of maneuver in the leadership of the Army than General William E. DePuy wrote in his reply to the critics of the 1976 version of FM 100-5.

Accustomed to open flanks, to operating on the basis of ambiguous intelligence, seeking the enemy and not the terrain, concentrating rapidly, and adapting constantly to the flow of events - these leaders have maneuver in their bones. 39

Clearly this comment is directed at the US Army's experience in Vietnam. It may be true for some. It hardly can be accepted as true for all. In order to insure that a doctrine permeates a military organization, it must be taught throughout the organization's school system. This must be done at officers basic courses through senior service college at the officer level and at Primary Non-Commissioned Officers (NCO) courses through the Sergeants Major Academy at the NCO level. The former Commandant of the US Army Command and General Staff College (CGSC), Lieutenant General William R. Richardson has stated that: 'The (Army's) schools and training centers must do more than provide general
instruction. They must teach officers and NCOs how to train tactically and to maneuver their units over the battlefield.\textsuperscript{40}

In retrospect, it is possible to accept that General DePuy's analysis may hold true for the tactical level. But what about the operational level? At present there is no instruction given in the operational art or grand strategy\textsuperscript{41} at either CGSC or at the US Army War College. The significance of this is that for the last decade the Army education system has not provided its leadership the basic schooling in the employment of corps and larger units. As apparently did General DePuy, it appears the Army leadership has assumed that knowledge in the employment of a division will also suffice for a corps, Army or Army group. The outstanding performance of the US Army professional general officers during World War II has been attributed to the very thorough and extensive (two year) military education they underwent at Leavenworth in the thirties. Of course, whether there is a formal course of instruction or not, there will always be those few exceptional officers (MacArthurs, Eisenhowers, Pattons, etc.) who will take the time to learn and become proficient in military art on their own. As perhaps the most influential figure on the faculty of the US Army Command and Staff School in the early 1930s Colonel (later Brigadier General) Edward L. "Schnitz" Gruber used to say, "There are few Napoleons."\textsuperscript{42}

Additionally with the increasing costs of defense, it is highly unlikely that we shall ever again see exercises on the magnitude of the Louisiana and Tennessee maneuvers of 1941 or the Carolina maneuvers in the early sixties. Therefore our service schools must use simulation, classroom problems and the study of historical examples to gain a feel for the operational art. To conduct successful maneuver at this level requires greater expertise than at the tactical level. But to acquire
this expertise is easier said than done. It will require tremendous risk to maneuver a large force on the modern battlefield. History is replete with examples of generals who did not measure up to successfully taking this risk when required. It follows also that in order for a general to be successful, he must have able, knowledgeable subordinates who understand his overall scheme of maneuver and possess the requisite skills to carry it out. General John W. Vessey, Jr., Vice Chief of Staff of the Army expressed concern that the Army was not preparing its leaders and commanders for the inevitable chaos of battle.\textsuperscript{43} This chaos of battle and the fear that accompanies it is not present in the classroom. Therefore, it becomes essential that the Army leadership be trained and conditioned to sort out the complexities of future battlefields so that they will make the correct decisions in the presence of fear. Noted military historian Colonel (RET.) Trevor N. Dupuy has said that "Nothing can be more obscure than future war and how it will differ from past wars. To reduce obscurity we need a base of certainty to which we apply the new uncertainties."\textsuperscript{44} This base of certainty must be developed at the Army War College. It is this institution which in addition to turning out the soldier-statesman must also provide the soldier-warrior with the tools he requires to visualize, plan and execute maneuver at the operational level. LTG Richardson in his article "Training for Maneuver Warfare" wrote:

If the colonels and generals are not competent in tactics, and if they do not display their knowledge in teaching their subordinates on a daily basis, they have abdicated both their authority and responsibility. The Army cannot win in a battle without competent and confident senior tactical leaders.\textsuperscript{45}

The essence and spirit of maneuver must be taught at Army service schools right up through the Army War College level. With the implemen-
tation of the Combined Arms Staff Service School (CAS), there are now courses of instruction which include tactics up through division level which can teach the principles of tactical maneuver. To complete and round out an officer's military education, there should be instruction provided on maneuver warfare at the operational level. This should become part of the curriculum at the Army War College. The victories and defeats of the past as well as the hypothetical battles of the future must be analyzed in detail. The Army must prepare its future leadership to conduct corps envelopments or the mechanics of conducting a penetration with a division to create an opportunity for such an envelopment. Moreover the War College student should be schooled in seeking out and recognizing the decisive point on the battlefield. He should become a past master in the techniques of establishing a favorable combat ratio at that decisive point so that his forces truely can fight outnumbered and win. The Army's reaffirmation of maneuver doctrine guarantees neither its implementation nor its understanding. The War College should take the lead in instructing its students in maneuver at the operational level. Colonel Wilson B. Burtt, Assistant Commandant of the Command and General Staff School described the need for the study of operational maneuver when he wrote on 10 September 1935 in the forward to "Maneuver in War,"

In the academic sequence of instruction at the Command and General Staff School, there is a period of transition from the reinforced brigade and division to the Corps and Army. It is in the nature of things that this transition is abrupt . . .

Consider that the average student has rarely commanded more than a battalion, the intelligent manipulation, even on paper, of the masses represented by the Corps and Army, called for a strategic imagination of a high order; in the absence of practical experience, such an operative skill can only be acquired through a careful study of great campaigns. . . .
ENDNOTES


12. Ibid., p. 33.


15. William S. Lind, "Tactics in Maneuver Warfare," Marine Corps


17. Department of Military Art and Engineering, Summaries of Selected Military Campaigns, USMA, West Point, Sep 1958, p. 7.


22. Ibid., p. 3-5.


24. General George S. Patton, War As I Knew It, p. 104.


27. Ibid., p. 33.


30. Ibid., pp. 2-5-2-6.

31. Ibid., p. 2-8.

32. Ibid., p. 2-9.

33. Ibid., p. 6-4.

34. Ibid., p. P-II-l.

35. Ibid., p. 2-9.


38. Doughty, op. cit., p. 47.


42. Dupuy, op. cit., p. 16.


45. Richardson, op. cit., p. 34.

46. LTC Charles A. Willoughby, Maneuver in War, Forward.
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