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The Essential Elements of Operational Surprise

by

Major Robert L. Clark, IV
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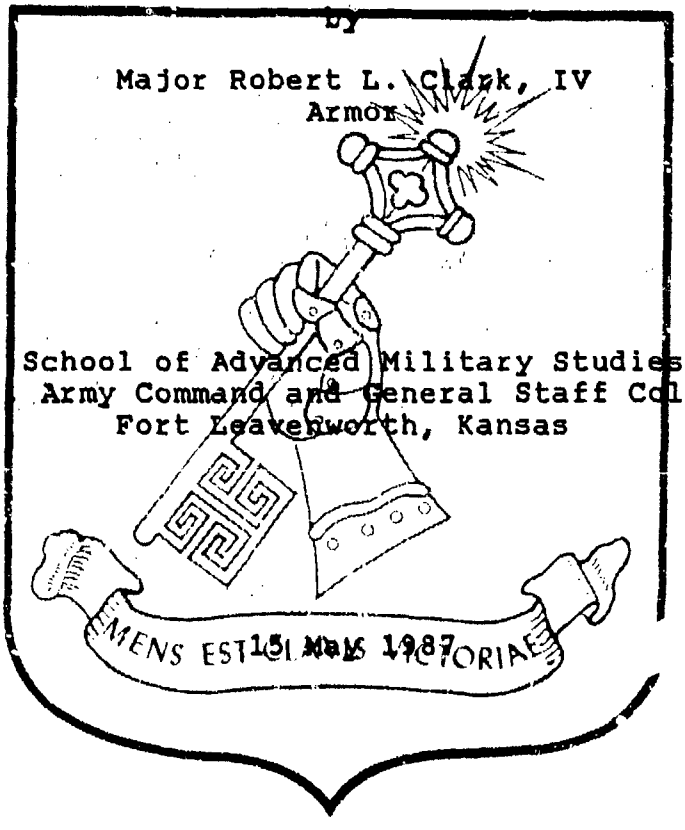

School of Advanced Military Studies
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This monograph examines operational surprise by answering the question, "What are the essential elements for producing operational surprise?" This issue is important because very little has been written about operational surprise despite the re-emergence of interest in the operational level of war. Surprise remains a basic and essential element in battle.

The monograph first examines the theoretical foundation for surprise. Next, both historical and contemporary evidence are examined to derive the elements that are necessary for achieving operational surprise. The four historical campaigns discussed are: France 1940, Normandy, Ardennes, and Sinai 1973. Conclusions and implications are drawn from the analysis of these four campaigns.

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enemy as to the exact time, location, and strength of a desired action, and by using new methods, techniques, and technology. Surprise is also achieved by reinforcing the enemy's false assumptions and expectations to one's advantage. Several factors that make these means so unique from those used to achieve surprise at the other levels of war are also discussed. The importance of "pre-conception" to the operational planner is highlighted. Finally, several implications are discussed. Specifically, the need to take advantage of operational surprise while on the defense is emphasized.

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ABSTRACT

THE ESSENTIAL ELEMENTS OF OPERATIONAL SURPRISE, by MAJ Robert L. Clark IV, USA, 41 pages.

This monograph examines operational surprise by answering the question, "What are the essential elements for producing operational surprise?" This issue is important because very little has been written about operational surprise despite the re-emergence of interest in the operational level of war. Surprise remains a basic and essential element in battle.

The monograph first examines the theoretical foundation for surprise. Next, both historical and contemporary evidence are examined to derive the elements that are necessary for achieving operational surprise. The four historical campaigns discussed are: France 1940, Normandy, Ardennes, and Sinai 1973. Conclusions and implications are drawn from the analysis of these four campaigns.

This monograph concludes that operational surprise may be attained by deceiving the enemy as to the exact time, location, and strength of a desired action, and by using new methods, techniques, and technology. Surprise is also achieved by reinforcing the enemy's false assumptions and expectations to one's advantage. Several factors that make these means so unique from those used to achieve surprise at the other levels of war are also discussed. The importance of "pre-conception" to the operational planner is highlighted. Finally, several implications are discussed. Specifically, the need to take advantage of operational surprise while on the defense is emphasized.

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THE ESSENTIAL ELEMENTS OF OPERATIONAL SURPRISE

Surprise is a basic and essential element in any form of competition; he who uses it effectively usually gains an advantage over his opponent. In battle, offensive or defensive, surprise can deny the enemy commander adequate time to adjust his forces to create a more effective opposition. It might, in some cases, confuse him, reduce his command and control capability, and cause him to expend resources needlessly. Invariably, surprise gains an advantage by setting the initial conditions for battle. This, in turn, might shorten the conflict and perhaps change the final outcome. A commander who fails to use surprise whenever possible denies himself the potential benefits of a highly effective combat multiplier.

The importance of the element of surprise has been recognized and studied by informed military leaders throughout history. Julius Caesar understood the importance of surprise when he stated in 47 B. C., "The most potent thing in war is the unexpected."[1] General Carl Von Clausewitz emphasized that "surprise is more or less at the bottom of all military enterprises."[2] Frederick the Great continually reminded his generals of the importance of surprise in military operations.[3] From 1927 to 1931, Colonel George C. Marshall, as assistant commandant of the U.S. Infantry School, placed considerable emphasis on the topic of surprise. This emphasis was institutionalized as Army doctrine in 1934 with the publishing of

Infantry in Battle. General Waldemar Erfurth, in his introduction to the military masterpiece, Surprise, stated that great commanders always distinguish themselves in the art of surprise and that surprise is the key to victory.[4]

More recently, General MacArthur, in 1950, stated, "Surprise is the most vital element for success in modern war."[5] Today, surprise is one of the principles of war and is identified in the most recent Field Manual 100-5 as one of the five characteristics of offensive operations. The principles of war, including surprise, have been and continue to be used as tools of reference for planning and executing military operations. There can be little doubt that proper application of these principles in conflicts throughout history has helped military commanders to achieve success.

The general subject of surprise is not only an interesting historical study but is quite relevant to us today. Most contemporary military thinkers and writers realize that "surprise should be striven for by all units, regardless of size, and in all engagements, regardless of importance."[6] While much has been written about surprise at the tactical and strategic levels, very little has been written concerning surprise at the operational level of war. With the re-emergence of interest in the operational level of war, it is important that surprise at that level of war be examined.

This monograph will examine operational surprise by answering the question, "What are the essential elements for producing operational surprise?" First, the theoretical foundation for surprise will be established. Then I will examine both

historical and contemporary evidence to derive the elements that are necessary for achieving operational surprise. Finally, implications concerning surprise at the operational level of war will be drawn from the analysis.

Before developing a working definition of operational surprise, it is important that the theoretical foundation for surprise be discussed. The thoughts of four theorists are relevant: Clausewitz, Baron De Jomini, Sun Tzu, and General Erfurth.

Clausewitz said that surprise is the root of all operations without exception and he suggested that secrecy and speed are two factors that produce surprise. Regarding these two factors, he stated that surprise could never be achieved under "lax conditions and conduct."[7] This demonstrates Clausewitz's understanding of the amount of effort required to achieve surprise over the enemy force and the value of operations security. In his mind, the possible success of an effort to surprise did not depend totally on the energy, forcefulness, and resolution of the commander. He believed that favorable conditions, usually not affected by the commanders, were also necessary for attaining surprise. Here, chance played an important role in whether favorable conditions existed.

Clausewitz recognized the importance of the relationship between the two opposing forces. In this regard, he believed that moral superiority often enables one force to intimidate the other and thus, that force could use surprise to a greater advantage. Clausewitz emphasized the psychological realm even further by

stressing that surprise confuses the enemy and lowers his morale. This confusion often multiplies the results.[8]

Finally, Clausewitz believed that while surprise had utility at all levels, it was primarily a tactical device. He observed that surprise was easier to achieve at the tactical level of war and the attainment of surprise became increasingly harder as one moved towards strategy. He observed that it was difficult for a state to surprise another with a strategic attack or secretly to prepare for war.[9]

Baron De Jomini points out that it is not necessary to achieve total surprise against an enemy. It is acceptable to attack as long as the enemy has not had ample time to prepare for the attack.[10] Like Clausewitz, Jomini recognizes the importance of creating confusion in the minds of the enemy as this may lead to a greater success. Jomini says that all opportunities for surprising an enemy should be taken.[11]

Sun Tzu says that all warfare is based on deception. He says a commander should move when it is advantageous and surprise the enemy by dispersing and massing forces, suggesting that the enemy be struck when he is least prepared and where he does not anticipate the blows.[12]

A more recent military thinker, General Erfurth, agrees with Clausewitz that surprise is only possible under favorable conditions.[13] His formula describing the conditions necessary for attaining surprise is: a good strategic idea + proper execution + conditions not controlled by the commander. Some luck and merit on one side plus mistakes, negligence, and ill luck on the other provide the necessary conditions for

surprise.[14] General Erfurth believed that these mistakes often surfaced as some form of "collaboration" by the opponent.[15] This unintentional cooperation with the enemy was often the crucial factor which permitted the surprise activity to occur.

General Erfurth agrees with Jomini that total surprise is not necessary for an advantage to be gained. He says that the enemy may know some important details about the operation but it is only necessary that he not know all the details in order that he may be surprised by one or more factors.[16] Finally Don Possony, the translator for Erfurth's Surprise, discusses how important it is for the enemy to lose confidence and face psychological defeat at the hands of the enemy. He says this is a main condition of victory.[17]

Thus, there are some common threads that link these theorists. First, all of them emphasized confusion as a major factor in achieving surprise against the enemy. Unbalancing the enemy psychologically is very important. Secondly, Clausewitz and General Erfurth agree speed and security are major elements that produce surprise. Both of them also commented on the amount of effort that must be expended by a force in order to plan and execute an operation involving surprise. While understanding the benefits of the carefully executed surprise operation, they both readily recognized the role of chance as a primary contributor to the existing conditions in which the surprise would take place. Finally, all of the theorists recognized the importance of surprise and its contributions to victory on the battlefield.

A generalization that can be made from this discussion is

that, for many years the whole idea of surprise has been widely accepted as a means of increasing a force's chance of defeating his enemy. Thus, the question is not whether the concept of surprise is a valid one, but how best to achieve it on the operational battlefield.

Having established a theoretical foundation for the concept of surprise, a working definition for operational surprise must be developed. While in the general military sense, surprise is defined as accomplishing the mission before the enemy can effectively react, a precise definition of surprise at the operational level of war is not readily available.[18] As part of the FM 100-5 description of the Airland Battle tenet, initiative, it is stated that surprise should be used in order to select the time and place of the attack. Also, it states that combat multipliers such as surprise should be used to gain the initiative, to throw the enemy off balance with a powerful blow from an unexpected direction. In discussing the operational level of war, FM 100-5 states the principal task of the operational commander is to concentrate superior strength against the enemy in order that the objectives of the campaign or major operations are met and thus, the strategic and political aims are achieved.[19]

Using these thoughts from FM 100-5, it is possible to develop a definition of operational surprise that will be adequate for the purposes of this paper. It is defined as unexpected activity against an adversary that is directed at achieving decisive results during the conduct of large scale operations or campaigns. It must be emphasized that this

definition is deliberately general so as not to be too restrictive. To be more specific, numerous factors such as the level of employment, the level of expected impact, and the target of the surprise should be considered when attempting to categorize surprise as strategic, operational, or tactical in nature.

HISTORICAL EXAMPLES

Four historical campaigns in which surprise at the operational level of war played an important role in the final outcome are discussed here. To provide a common framework for analysis, the campaigns will be discussed by using factors identified in the discussion of surprise as a principle of war in FM 100-5. These factors are deception operations, operations security, and variations of tactics and methods of operation. The discussion concerning deception will focus on efforts regarding the elements of time and location. Additionally, the factors of planning and collaboration will be also discussed because of their overall importance. This discussion will be used to gain an understanding of what means are available and what makes them unique in achieving operational surprise.

France 1940

On May 10, 1940, The Germans began their offensive against the Allies with attacks on Holland and Belgium. In less than three days, the French Army had become a disorganized fighting force.[20] The most shattering element contributing to the rapid destruction of the French forces may well have been surprise.[21] Almost complete tactical and operational surprise was achieved by

a combination of factors that warrant discussion.

The German plan for the defeat of the Allies called for an initial supporting attack in Holland and Belgium with a subsequent main attack through the Ardennes focused on the French at Dinant, Montherme, and Sedan. The supporting attack was designed to lure Allied forces northeast into Belgium and thus, cause them to be malpositioned to counter the main attack. The German plan called for achieving surprise by confusing the French as to both location and time of the main effort. To achieve this, the Germans wanted to reinforce the French expectation that the schwerpunkt would come through the Gembloux Gap in central Belgium. The goal of the surprise attack was to deliver an overwhelming blow through the Ardennes, cross the Meuse, then a rapid advance across Northern France, cutting off the Allied Forces in Flanders.

Deception efforts were an integral part of the German plan. Both tactical and operational in nature, these efforts were the result of meticulous and imaginative planning that ensured the synchronization of all activities. This detailed planning was characterized by a distinct linking of all deception efforts in order that they would support the execution of the operational plan.

After crossing the Meuse River on the night of 12-13 May, German forces achieved a deep penetration and breakthrough of the French defensive positions. In a matter of days, the French Army was decisively beaten. What were the factors that enabled the Germans to achieve surprise and how were the factors used in order to result in such a crushing defeat?

First, the location of the German schwerpunkt was a total surprise to the French high Command. They believed the Ardennes Forest to be impassable terrain for the movement of troops on a large scale and even more difficult for the movement of large formations of armor.[22] It was felt that the "terrain would defend itself."[23] Interestingly enough, the Americans also believed the Ardennes region to be impassable.[24] They, likewise, would be surprised two and a half years later.

Another factor that led to confusion as to the true location of the main attack was the employment of multiple spearheads into the Allied territory by Von Manstein. Excluding the most northern axis, each axis had at least one panzer corps supporting the drive to the west. Because of this apparent dispersal of combat power, the Allies were not able to determine which of the thrusts they should defend against until it was too late.

The timing of the attack played an important role in achieving surprise. For example, General Gamelin, the Supreme Commander French Land Forces, did not believe the Germans would attack; therefore, he also restored normal leave privileges to the soldiers of the Army.[25] Obviously, the Germans attacked at a time when the French did not expect them.

The campaign serves as a model of a revolutionary method of fighting that was not expected by the enemy and thus, contributed significantly to the attainment of operational objectives. The French were astonished by the method of the German attack. A vital factor in the German victory was the combined use of field artillery, antitank, and dual purpose antiaircraft weapons. The

use of the Luftwaffe aircraft as a mobile artillery force created the conditions for rapid advance. The French were not prepared to fight such a fast moving battle (later called Blitzkreig). Although the weapons were not new, their innovative use and the emphasis on combined arms forced the French to fight not only a war unfamiliar to them, but also one to which they were unable to adapt.

Perhaps the greatest contributor to the rapid French defeat was the French themselves. Unknowingly, the French made certain decisions that actually reinforced the German plan. Primarily, it was the various flawed assumptions and false expectations that led to defeat. The assumption concerning the impassability of the Ardennes Forest has already been discussed. This and other pre-conceived notions caused the French leadership to reject or ignore intelligence reports of the German build-up across the Ardennes region. Because of their pre-conceived notions and their complacency, the Belgians and the French decided to place only 16 divisions in the region to act as a screen.[26]

If this were not enough, later the French poorly calculated the preparation time needed by the Germans in order to cross the Meuse River. They believed the Germans would need to regroup, bring up artillery, and conduct extensive preparations for the river crossing. The French, believing that they had time to react, did not plan for the reinforcement of the Meuse by the first elements of an additional 11 divisions until 14 May. By the 13th of May, the German forces were already at the Meuse and preparing to cross, while the French were thinking and reacting at the same tempo as in the First World War.[27] The Germans

deployed three days quicker than the French thought possible. Thus, the French pre-conceptions concerning the Germans' capabilities helped set the stage for German victory. The final factor was the overconfidence of the French High Command. Gamelin, Georges, and Billotte all believed the French Army to be capable, at the very least, of stopping the enemy.[28] In addition to the invalid assumptions that were accepted, the French leaders never questioned the basic doctrine they had developed to defend their borders against the German attack.

It is important to discuss the role of security, a reciprocal of surprise, in the campaign. The Germans maintained the security of their plan by reinforcing the pre-conceived notions of the French High Command. They led the French to believe that the main effort would be in the north. They also took the necessary precautions not to do anything that would reduce the French belief that the Ardennes region was impassable. Finally, the Germans created a false sense of security in the minds of the French by postponing the attack on numerous occasions. Although these delays were not directly aimed at producing a "cry wolf" syndrome within the French command, the French did become lax and, as a result, did not react to the intelligence reports that indicated a forthcoming attack.

Two other points are worth mentioning. There were no security leaks on the part of the Germans just prior to the attack. Also, the use of good cover and concealment and camouflage by the Germans was evident as no abnormal activity was noticed. The Royal Air Force flew two reconnaissance flights the

day before the attack and the pilots reported seeing nothing unusual.[29] Thus, security contributed to the overall success of the plan.

In summary, it should be emphasized that the German Army was able to use a combination of means to achieve surprise against the French. Perhaps, the most important single factor in this campaign was the "collaboration" of the victim. The French made several false assumptions prior to the attack which were quite helpful to the Germans. The fatal mistake was not going back to check the continuing validity of these assumptions. Also, these pre-conceived notions tainted the interpretation of intelligence reports and, thus, the French were not prepared. Other factors related to the timing, location, and strength of the attack aided the Germans in achieving surprise.

Normandy

In many minds, the Allies were undertaking the most ambitious and most risky of military operations up to this point in the war. To conduct a major campaign beginning with an amphibious operation of such magnitude was strictly a win or lose proposition. The success of the Overlord plan, and more specifically, the actual invasion of the Normandy coast designated Operation Neptune can be attributed directly to the attainment of tactical and operational surprise by the Allies. There was no doubt that the Germans strategically expected an Allied invasion, but as General Erfurth emphasized, total surprise is not required. Had the Germans been able to concentrate their available forces against the forces assaulting the beaches, the invasion would probably have failed. As it was,

excellent security, effective deception, and the assistance of the weather, combined to ensure that the Germans were surprised.

The Germans were not able to determine the time, place, or strength of the Allied invasion. Their intelligence led them to believe the invasion would be in July of 1944 in the Pas de Calais area and it would be supported by 42 mythical divisions.[30] As early as 1943, the Allies recognised the need for achieving surprise and immediately began to include such efforts in the planning work. How was the high degree of surprise achieved by the Allies?

Success of the Allies' deception plan, called Plan Fortitude, depended on deceiving the Germans as to the true location of the attack, in order to cause them to misarray their forces, and thereby, alleviate some of the Allied problems of getting ashore. To achieve this, specific events were planned to reinforce the German's beliefs concerning the most probable location and time for the cross-channel attack. The plan was also designed to convince the Germans that the invasion would come later than the actual planned date. Fortitude South was the specific plan designed to reinforce the German's pre-conception that the 1st (US) Army Group would lead the main effort in the Pas de Calais area. The Allies also attempted to bolster the Germans belief that an invasion was probable in Norway and other Scandinavian countries where they would face a joint British, American, and Russian attack. This attack would be followed by maximum effort against the Pas de Calais area. The objective of the deception plan concerning the attack location was to make it

difficult for the Germans to concentrate a sizable force against the Normandy invasion site.[31]

The Allies also contributed to the location dilemma for the Germans by adjusting their aerial bombing plan. On D-Day-3 and D-2, the 8th Air Force was to shift approximately 40 percent of its bombing effort from Germany to the Pas de Calais area. On D-1, one half of the Air Force would rest, one quarter would continue to bomb the Pas de Calais area, and one quarter would strike Normandy.[32] The plan was successful because as late as D-1, Army Group B felt the Allied bombing pattern indicated the main attack was to be in the Pas de Calais area.[33]

The deception plan also attempted to deceive the Germans as to the actual time for the invasion. In the spring of 1944, the allies conducted two full scale amphibious assaults that were designed to lead the Germans to believe that these exercises were the first of a series scheduled in preparation for the main assault to be launched in mid-summer. When no evidence of an attack surfaced, the Germans concluded that the Allies were not prepared to launch an invasion. Additionally, the weather aided the deception plan just prior to 6 June 1944. In the estimation of the Germans, the bad weather in the channel area prevented the launching of an assault force. They even cancelled their own naval patrols for the evening of 5 June.[34] Rommel felt secure enough to make a trip back to Germany to visit his family and consult with Hitler.

Plans also called for confusing the enemy as to the strength of the invasion force. Dummy headquarters simulated by radio and dummy installations were established. Included in this was the

false appointment of General George S. Patton Jr. to command the "assault" force of the U.S. Third and the Canadian First Armies. The Germans respected the bold Patton and were convinced that he was the natural choice to lead the invasion of the continent. With no indications that he was prepared to attack, the German pre-conception that the invasion would occur later than actually planned was reinforced.

The success of the Allied efforts to achieve surprise concerning the location and time of the invasion is demonstrated by comments of Von Rundstedt in his June 5th weekly report. He said, "where within this entire sector the enemy will attempt a landing is still obscure... As yet there is no immediate prospect of the invasion."[35]

The Allies also achieved surprise through the employment of new technology. A major concern of the Allies was the logistical support of the combat forces during the initial phases of the operation. Until Cherbourg and other ports could be captured, supplies would have to be delivered either through aerial means or across the shore. Contemporary logic dictated that a large invasion force could not be sustained without port facilities and German plans emphasized the denial of these facilities to the Allies. However, use of the artificial "mulberry" harbors enabled the Allies to discharge the necessary supplies in sheltered waters. These artificial ports substituted for the permanent ones that were still in German hands.

Another technological asset that aided the achievement was the use of radar countermeasures to mask the approach of the

invasion fleet. Air dropped metal strips and ship-towed balloons created a screen that swamped the German early warning radar.[36] This technique was deliberately not used until the night of 5 June in order to achieve surprise for the invasion fleet as it crossed the channel.

It is important to discuss the security measures of the Allies. Only a select group of senior political and military people knew the exact time and location of the invasion.[37] Troops participating in the invasion did not know this information until after the actual launching. The marshalling areas were off-limits to visitors. Camouflage of the restricted areas was rigidly enforced and dummy assembly areas and headquarters were established.

Certainly, the Germans made various assumptions which were reinforced by Allied deception efforts to help achieve surprise. Many of the assumptions dealt with the location of the invasion. Both Hitler and Von Rundstedt believed that the attack would come in the Pas de Calais area because it was nearer the probable key objectives of the Rhine River and the Ruhr industrial area.[38] This belief was bolstered by the fact that the location provided the shortest sea journey from the British Isles. The Germans thought the shorter journey would be an important factor to the Allies in achieving a surprise assault. Also, the air support and later the resupply would be easier. An important point is that the Allies were aware of Von Rundstedt's expectations.

The Allies gained much information concerning the intentions of the Germans from ULTRA, a system for decoding intercepted enemy messages. Using radio traffic and double agents, the Allies

reinforced these expectations. Being aware of the common beliefs held by the Germans concerning the invasion, the Allies were able to reinforce or modify those beliefs to support their basic plan for the invasion.

Again, it is evident that a combination of various means was used to achieve operational surprise. Deception efforts confused the Germans as to the location, time, and strength of the invasion. When the June 6 attack began, the German forces were not optimally positioned to defeat the assaulting forces. In this particular case, a high degree of operational surprise was achieved primarily because of the superbly planned and executed deception plan by the Allies. Actual tactical operations were designed to prevent The Germans from detecting the main effort until it was too late to react. In fact, deception measures continued after the invasion to further ensure that the Germans would be confused as to the location and strength of the main effort.

Ardennes

The Ardennes campaign was precipitated by a large surprise attack by the Germans. Although the American forces succeeded in halting this last ditch effort and later drove the Germans back, the Germans did achieve almost total tactical surprise later to result in the attainment of operational surprise.

The German counteroffensive, code named Wacht Am Rhine (Watch on Rhine), was designed by Hitler to enable the German forces to cross the Meuse River, seize the port of Antwerp, and split the

Allied front. He believed that the Ardennes counteroffensive presented the last chance for a major victory and the attainment of his objectives. The Germans planned and executed a masterful deception plan designed to provide them with tactical and operational surprise over the Allied Army. A greatly weakened force, the Germans hoped to use surprise to offset the capabilities of the stronger Allies.. The German's plan capitalized primarily on the general Allied perceptions concerning the Ardennes region. They realized that the Americans assumed the region to be quiet and non-threatening compared to areas north and south of the region in which major activity was expected.[39] Hitler also combined his counteroffensive plan with the expected Americans plan for an offensive. Realizing that the Allies were preparing to drive to the Rhine, he knew that any local troop positioning would be viewed as a logical reaction to known future Allied plans. Therefore, he positioned the 6th Panzer northwest of Cologne. This headquarters and several panzer divisions assigned to it were positioned to serve as decoys to allow the Allies to identify their location. At the same time, 5th Panzer was secretly placed in the Eifel Forest region. A plan was designed to cover their positioning by calling for them to counterattack the southern flank of any American attack across the Roer.[40] Another effort to hide the force build-up and location of the attack was accomplished by giving Manteuffel's Fifth Army a military police command designation.

Additional efforts to mask the true location of any attack included increasing the easily observed activity in the north

near Cologne while maintaining minimized observable activity in the Eifel region. Road repair and civilian evacuation were conducted in full sight of the Allies. Radio traffic also increased to demonstrate the additional troop activity. Even the Allied pilots noticed increased anti-aircraft fire in the suspected counterattack assembly area. At the same time in the south, strict measures of radio silence, camouflage discipline, little registration of artillery, and restrictions on combat patrolling ensured that no undue attention would be drawn to the region. Overall, the Germans went to great lengths to surprise the Americans as to the location of an attack.

Timing was a major point of consideration. By hiding any indicators of an impending attack, the Germans were free to time the attack based on the expected bad weather in December. This timing would help minimize the Allied air strikes against the attacking German force. Just prior to the attack, the Germans used aircraft to distract attention away from the clamor of armored vehicles.

Without a doubt, the Germans achieved surprise by taking advantage of several pre-conceptions brought on by the American "mindset." The first general pre-conception was that because of recent victories, the Allies saw the German Army on the path to ruin. This optimism existed throughout the U S Army at the time. Most U. S. leaders also believed that Von Rundstedt was too conservative a soldier even to consider launching a counteroffensive when risks were so great. What the Allied leadership did not understand was that Hitler, not Von Rundstedt,

was in command.[41] The majority of the German activity was explained by the American intelligence community by tying it directly to German forces reacting to the American offensive plans for the Roer area. The Germans exploited this condition by publishing orders and sending radio messages that were purely defensive in content. For example, the first paragraph of each movement order began "in preparation for the anticipated enemy offensive."[42]

This mindset of the Americans also blurred their vision of various indicators and stifled any initiative to seek related intelligence prior to the battle. Most units in the Ardennes became accustomed to performing very little patrolling. This lack of diligent patrolling prevented the Americans from obtaining valuable combat intelligence. Air reconnaissance activity over the Eifel was low priority when compared to the region around Cologne. However, even the limited air reconnaissance patrols showed a build-up of German rail and road activity behind the Eifel.

The operational commanders had also developed a mindset towards the use of the intelligence gain from ULTRA. Because it had been so reliable for informational purposes in the past, they now came to rely on it to a great degree. When Hitler restricted communications, ULTRA did not detect preparations for the attack, and without it to verify other information, the Americans simply discounted the limited indicators of an attack.

What should have been adequate indicators were detected by the Americans. In total, there were seven recorded incidents just prior to the attack, one of which was reported to 12th Army

Group.[43] Additionally, aerial reconnaissance reports substantiated ground reports of the enemy's preparations.

The Germans went to extraordinary measures to maintain security of the operation. Officers were sworn to secrecy under the penalty of death should they compromise the plan. Special couriers were used to transport written materials. To prevent a repeat of the compromise of possible attack plans that occurred in 1940, no flying west of the Rhine River was permitted in order to preclude capture of couriers with classified information. In front-line forces, only trusted personnel were allowed to go out on patrols. Also, foreign soldiers were removed from the front-line divisions to prevent possible desertions. A special method of designating the target date was also developed to prevent the Allies from determining the date of the operation.[44] Wheels of vehicles were wrapped with straw and roads were covered with hay to muffle the sounds of motor movement.[45] Just how well the security effort worked is demonstrated by the fact that even local German commanders accepted as truth the idea that the activities throughout the Eifel region and to the north were intended to provide fresh troops for the defense of the Ruhr and the Palatinates.[46]

In summary, the Americans were surprised by the Germans who maximized the use of deceptive means in order to achieve a high degree of surprise. They were able to prevent the Americans from learning of an attack much less the location, time, and strength. They accomplished this by taking advantage of the Americans false assumptions and lax, over confident attitude. Additionally, they

reinforced certain American pre-conceptions to optimize the chance for operational surprise. Although the necessary indicators were present, they were either misread or not recognized and the Americans were blinded as to other possibilities.

Sinai 1973

The Sinai Campaign of the 1973 Arab-Israeli War is a contemporary example of operational surprise being achieved under modern battlefield conditions. It illustrates how new weapons, technology, and equipment were used to help achieve surprise. The objective of the plan was to regain the area of Sinai and other territories lost by the Arabs in the 1967 War. The desired result of the campaign plan was to capture these lands before the Israelis had an opportunity to mobilize fully and counterattack. By using surprise, the Egyptians hoped to achieve a credible military success and then quickly negotiate.

The timing of the attack played an important role in achieving surprise. The date of the attack was specifically planned to be during the Moslem religious month of Ramadan and on the Israeli Yom Kipper. An attack during both holidays would not be expected by the Israeli's. Accordingly, the Egyptians expected there would be reduced readiness, dispersal of forces, and degradation in the Israeli command and control system. The exact timing of the attack for 1400 hours was calculated by the Egyptians to gain surprise and to allow them to conduct numerous activities prior to darkness and yet, prevent the Israelis from having ample reaction time before darkness. The Egyptians were able to prolong the effects of the surprise attack

until the next morning when the Israelis could begin their air operations.[47] To ensure the timing of the attack was not compromised by unusual movement of equipment along the Suez Canal, the Egyptians achieved the necessary concentration of equipment by not releasing units after the annual maneuver exercises were completed.

New innovative tactical fighting methods assisted in achieving surprise. First, the Egyptians planned from the outset to consolidate gains on the east side of the Suez Canal. This was contrary to the normally practiced Soviet doctrine of exploiting success. The Israelis expected the Egyptians to follow Soviet doctrine and this tactic presented the Israelis with a situation they had not anticipated. Egyptian infantry established hidden anti-tank defenses and permitted the Israeli tanks to close within 300 meters before firing a volley of anti-tank rounds.[48] The results were devastating. The Egyptians also devised a belt of surface-to-air missiles to protect the ground forces in the Sinai that would substitute for offensive air power. Thus, the Israeli Air Force likewise was presented with unanticipated battle conditions that prevented them form gaining air superiority over the battlefield and caused significant loss of aircraft. In effect, the Egyptians set the initial conditions of battle, forcing the Israelis to change their tactical techniques and procedures.

The Egyptians also achieved surprise by using new equipment in an innovative manner. The basic problem for the assaulting force was to establish a bridgehead more quickly than the

Israelis thought possible.[49] Surprise could be achieved if the consolidation took less than the Israeli estimated 48 hours. The Egyptians planned to do this in several ways. A new piece of equipment, the PMP pontoon bridge, was used to bridge the canal. It could be laid at 21 feet per minute and thus, could be emplaced across the canal in less than 30 minutes.[50] Additionally, a new high pressure water pump was used to break down the high sandy banks on the edge of the canal. These two pieces of equipment enabled the Egyptians to cross the canal and consolidate a bridgehead at a much faster pace than was expected by the Israelis.

The primary means of deceiving the Israelis was accomplished by taking advantage of certain assumptions and false expectations. First, the Egyptians had forced the Israelis to react on four previous occasions to Egyptian mobilization. The Israelis could not afford to react to false alarms because of the economic problems created for the nation. Egypt also lowered the sensitivity of the Israeli leadership by repeatedly declaring that "This year is decisive to fight against Israel."[51] This element of the Egyptian deception plan lulled the Israelis into ignoring the repeated hostile activity as harassment.

In late September, Palestinian terrorist action in Austria diverted Israel's attention away from the situation at home. While their enemy's attention was focused elsewhere, the Egyptians conducted preparations for an attack under the pretense of building up their defenses against an Israeli retaliation raid. While a direct link has not been made between the Austrian incident and the Arab-Israeli War, the Egyptians certainly took

advantage of the opportunity.

The Israeli's intelligence community also believed "As long as the Arabs do not have enough air power to allow them to strike deep into Israel and challenge the Israeli Air Force and as long as they do not possess long-range ground-to-ground missiles to deter - by threat of retaliation - deep Israeli air strikes, then war is not to be expected."[52] This assumption that the Egyptians would not fight unless they had all the necessary means for total victory was incorrect. They were willing to fight for a limited victory even though they would not be totally satisfied politically or strategically with the results.

In addition to the assumptions and false expectations, the Israelis also suffered from overconfidence in their defense forces and a belief that their intelligence community could give them sufficient time to react to a surprise attack. This notice did not come primarily because they refused to accept the readily apparent signs of numerous indicators available to them.

Finally, security played an important role in the campaign. On the Egyptian side, extreme security measures were taken to keep the operation secret. Officers were prohibited from contact with foreign diplomats and the detailed plans were distributed to subordinate field commands on a limited basis.[53]

The surprise of the Israelis resulted partially from their overwhelming sense of security and perceived moral superiority. They did not believe the Egyptians were capable of attacking. This false feeling distorted their view of their opponent's capabilities. Although numerous indicators pointed to an

impending attack, the Israelis failed to react in a logical manner. They learned that an over abundant feeling of security can be just as deadly as no security at all. Of course, the success of the Egyptian deception plan also must be recognized. The Egyptians did an excellent job of identifying the pre-conceived notions of the Israelis and then bolstering those notions with their misinformation campaign.

Conclusion

From the four historical examples, it is clear that surprise at the operational level of war is achieved through a variety of means. Operational surprise may be attained by deceiving the enemy as to the exact time, location, and strength of a desired action, and by using new methods, techniques, and technology. Surprise is also achieved by reinforcing the enemy's false assumptions and expectations to one's advantage.

The historical examples illustrate that by using multiple means, the force attempting surprise increased the degree of confusion in the enemy's mind and thus, increased his own opportunity for achieving surprise. The use of a combination of means also has a better chance of persuading the enemy to act in the desired manner while the single or limited use of the available means may not project a sufficiently complete picture to the enemy.

What makes these operational means so unique from those used to achieve surprise at the other levels of war? One factor is the degree of future impact the means may have. Generally, the means used at the tactical level have little or no influence on the course of the war; the effect is short-term. The impact of

the means used at the operational level to achieve surprise has a greater long-term effect than that of tactical means. Because of the specific means used, the resulting surprise affects the outcome of the campaign or major operation.

These means are, in effect, the same as those used at the tactical level of war. What makes them unique at the operational level is their careful linkage and integration into the campaign plan to achieve the desired operational effect. A well coordinated and executed deception plan often enables the force to achieve the surprise necessary to gain an advantage at the operational level.

Another factor is the level of the target at which the surprise is focused. For example, the target may be the self-confidence and stability of the mind of the enemy commander. If the opposing commander has responsibility for operational level concerns, then any activity designed to unbalance him will probably have operational results.

Finally, the planning for the use of these means makes them unique. It is apparent that there exists in operational planning a distinct relationship between the desired surprise and the tactical means used to achieve it. First, the historical examples illustrate the necessity of a clearly communicated intent for the campaign or major operation by the operational commander. Once this intent is known, the operational planner is able to plan a series of tactical events that support achieving that intent. The developed plan must contain coordinated deception elements if the potential resulting surprise is to

contribute to the desired end result. The tactical means are carefully linked together to provide the enemy a credible, yet false picture of the battlefield. It is the coordinating and linking of the tactical means that proves to be the crucial element in attaining surprise at the operational level; thus, the deliberate planning of surprise activities is key to successful execution of the plan.

The historical examples illustrate that a common means of achieving surprise involves taking advantage of the enemy's pre-conceptions concerning his opponent. Especially if the enemy's beliefs are known, the force seeking to gain surprise can take the necessary actions to reinforce them. When conducting deliberate planning that involves the use of surprise, the operational planner must think in terms of the desired result. The desired result is a function of the existing enemy pre-conception plus the effects of the tactical means used to reinforce that pre-conception. The product of pre-conception + tactical means is the misconception. It is the misconception that will hopefully lead the enemy to act in the desired manner.

In all the examples, there was a "common" set of pre-conceptions and conditions that was exploited by the opposing force. First, a feeling of complacency usually exists within the surprised force. This complacency was usually the result of a number of false assumptions concerning the enemy capabilities and intentions. A related false sense of security was also present. For example, Israeli military leaders d'd not believe the consolidation of a bridgehead across the Suez Canal could be accomplished in less than 48 hours. Also, their feeling of

having "secure borders" resulted in a complacent attitude and the false sense of security.

Another prominent condition involving the surprised force was having false expectations as to the intentions of the opponent. The Allies did not believe the Germans had any desire to conduct such a bold counterstroke against the forces in the Ardennes region in 1944. This false expectation was based on the belief that the Germans were constrained by a lack of manpower, equipment, and supplies. Additionally, it was thought that the Germans were content to fight a defensive battle to save the remaining German territory.

Also, a common condition was the failure to reverify periodically standing assumptions. Once an assumption had been made concerning the enemy, that assumption was considered to be correct and nearly timeless. Because the assumption was often widely accepted by the majority of the military leaders, the small minority who had serious reservations were often ignored. Assumptions must be tested on a routine basis to prevent sudden surprises.

In most cases, the force being surprised held a feeling of moral superiority over its adversary. This false feeling clouded the judgment of the military leaders and had adverse effects on the subsequent important decisions made by them.

Finally, in all of the historical cases, the surprised force suffered from a condition of mental rigidity. Once the leadership had adapted to a particular point of view, they went to great lengths to rationalize events that did not fit their

pattern of beliefs. For example, the Allies received numerous indications that pointed to an attack in the Ardennes Region in December, 1944. Because of various pre-conceptions and a mental rigidness towards integrating new intelligence information, they allowed the pre-conceptions to become misconceptions. These misconceptions resulted in their being surprised by the Germans.

By analyzing the impact of these various factors, it is clear that when they exist in part or in total, the potential for a force to achieve operational surprise over an adversary increases tremendously. The task of the operational planner is to take advantage of those conditions which he can influence through tactical means and to maintain the necessary flexibility to take advantage of those "chance" conditions which develop without warning. As Clausewitz and General Erfurth described, the possibility of "chance" surprise occurring on the battlefield is great because many conditions on the battlefield are uncontrolled by either commander. The operational commander and his staff must recognize opportunities presented by such conditions and take advantage of them. The flexibility of leaders and their command and control system are key to seizing these opportunities in timely fashion.

Having discussed both the means used to produce operational surprise and the importance of pre-conception to the operational planner, it is necessary to discuss the roles of intelligence, technology, and security in achieving surprise. All four examples illustrate the importance of discovering and using the mistakes of the enemy to one's advantage. Intelligence about the enemy's ideas, capabilities, intentions, and expectations are

essential pieces of information for the operational planner. The more complete picture the planner has of the enemy, the greater the opportunity for surprise-oriented activities to be planned and executed. Ideally, the operational planner attempting to deceive the enemy would rather reinforce an existing pre-conception than attempt to establish totally new misconceptions by injecting his various means into a sterile environment. Therefore, intelligence at all levels is key to achieving surprise and the recognition of the enemy's vulnerabilities is paramount to success. Once the vulnerability is discovered, the force must be able to take full advantage of the fleeting opportunity. This demands careful and detailed analysis of the enemy's pre-conceived ideas in order to identify possible areas of weakness that can be exploited. Obviously, the reinforcement of a pre-conception cannot occur without the necessary intelligence support detecting the initial enemy viewpoint. The intelligence system is a fundamental element in the deception process; it lays the foundation for future efforts.

Some conclusions concerning the role of technology can be drawn from the four historical examples. It appears that technological advances such as new weapons and equipment are seldom the primary means used in achieving operational surprise. Rather, it is the innovative use of existing equipment. The German's integration of existing systems (many of which were inferior to the French systems) into their Blitzkreig concept of warfare is illustrative of this. The Egyptians provide a different example. They modified an existing piece of pumping

equipment to accomplish a tactical task on the Suez Canal. That innovative technique had operational results.

The role of security is highlighted also. Essential to any plan involving surprise is the requirement to maintain adequate security without hindering the planning, coordination, and execution of the plan because of the fear of compromising the plan. Security can benefit or hamper the chances of attaining operational surprise and subsequently, the accomplishment of the mission.

Finally, surprise is most often used to achieve decisive results by combat forces on the operational offensive. Very seldom does a defensive-oriented force use surprise as a combat multiplier. The reason for this may be the fact that surprise is closely associated with setting the conditions for battle or seizing the initiative. Therefore, the use of surprise is closely linked to offensive operations or campaigns and not defensive-oriented ones where the force is characterized as being reactive. Realizing these points, the operational planner must remember that surprise may help to negate the superiority of numbers of men and equipment normally held by the attacking force.

In any case, surprise has and will continue to be one of the important keys towards attaining success on the operational battlefield. It has been correctly stated[54] that it nearly doubles a force's combat capabilities. It should be a focal point for all military leaders and planners when conducting operations.

Implications of Operational Surprise

Doctrinal emphasis on the operational art has increased

dramatically in recent years. Accordingly, much discussion revolves around the topic of operational maneuver and how to achieve it. Military thinkers understand the necessity for surprise and its impact of making victories more decisive. AirLand Battle doctrine must emphasize the necessity of taking advantage of surprise at the operational level of war.

Current doctrine, as outlined in Field Manual 100-5, emphasizes surprise as one of the characteristics of offensive operations while it is not mentioned in the discussions of defensive fundamentals or operations. While surprise is obviously more difficult to achieve in defensive operations, AirLand Battle doctrine should emphasize that surprise is one potential means to destroy the advantages of the attacker. The attacker faces more uncertainty which throws him off-balance. Surprise deprives him of his initiative and assists the defender in defeating the attacking force.

This issue is critical because the U S Army will probably begin the next war in a defensive posture. Therefore, it would be wise to study how best to take advantage of operational surprise while on the defense in order to influence the initial conditions of the battlefield. Victory will depend on wresting initiative away from the attacking force. Surprise is one means to achieve this. Clearly, the U S. Army has no option but to give more thought to this issue, given the realities of the next war. To summarize, the current mindset that emphasizes the element of surprise only in offensive operations must be broken. Surprise as a combat multiplier is too important to limit it.

An intelligence related implication concerns the need to know the enemy operational commander. For example, a critical factor in the Normandy invasion was whether Hitler or Von Rundstedt was directing the operations. Specifically, the peculiarities of the enemy commander must be understood. His personality and tendencies for action should be identified through intensive intelligence efforts and study. If his intentions and likely future actions are known, then plans can be made to take advantage of this knowledge. It is much easier to achieve surprise at the operational level of war when you have good intelligence regarding his intentions. Often this means that the operational planning staff must learn to think as the enemy thinks. This is no easy task but one that must be improved upon.

These types of intelligence requirements must be supported if maximum benefit is to be derived from surprise activities. There exists, in general terms, adequate strategic intelligence means to provide selective information concerning the enemy's activities. However, better means to acquire information concerning unquantifiable issues such as the peculiarities of the enemy commander are needed.

What the operational planner does with the intelligence once he gets it is very important. The tendency is to identify the enemy's courses of action based on widely approved estimates of capabilities, without giving due consideration to possible "new" capabilities, the result of some new technology or tactic. It is important to project beyond the "worst case" scenario periodically and consider possible capabilities that may seem

even more remote. A balance must exist between assessing the enemy's realistic capabilities and those which seem to be overrated. Just as the Israelis were surprised as to the capabilities of the Egyptians, so could the U S be surprised. We should not sell our enemies short. We need to give them due credit and on some occasions, even more than that in order that we not be surprised.

To accomplish this, it is important we listen to the "small" voices in the intelligence community. It is the minority in many cases, having analyzed the battlefield situation from a different viewpoint, that has determined a quite reasonable alternative exists for the enemy. The implication is that it is important to support subordinate leaders who are willing to express their own opinions and not be yes-men. Our Army must promote the proper leadership environment to ensure that this minority is heard.

Surprise must be a primary consideration in the planning process of today's operational planner. Although he will normally employ deliberately planned surprise means, he must be also alert to sudden opportunities resulting from "chance" surprise. A high degree of mental flexibility is necessary to adapt to the changing battlefield. Proper education must occur within the professional development system to ensure that the planner is capable of taking advantage of both types of surprise. Additionally, the planner at the operational level of war must seek to prolong the effects of surprise. Surprise is a fleeting element on the battlefield; the enemy will fight to

regain his control and his equilibrium in hopes of regaining the initiative. The truly successful leader is the one that knows how to maximize the benefits of surprise achieved against the enemy. Peace-time training must emphasize these points.

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