



Japanese heavy
cruiser *Mikuma* at
Midway.

Operational Overreach and the Culmination Point

Naval Historical Center

By MILAN N. VEGO

Probably no concept of operational art is as complex as culmination. In an article entitled “Why Strategy Is Difficult” that appeared in these pages in Summer 1999, Colin Gray discounted the utility of the concept of culminating points. Yet despite its problematical nature this element of operational theory has demonstrated utility in explaining the conduct of campaigns and will remain an essential construct for understanding future wars.

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Application to Levels of War

Culmination did not receive proper attention until operational art was revived during the late 1970s and early 1980s. Since then, the Army has given more attention than other services to the concept. Nevertheless, it is applicable to all functional, joint, and combined operations.

The notion of a culmination point is identified with Carl von Clausewitz, who described it as the moment when “the remaining strength is just enough to maintain a defense and wait for peace.” Once past, the chance of victory would be foreclosed unless an enemy yielded without engaging in decisive combat. An enemy would prevail if it choose to fight. Culmination could be



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Battle of the Bulge.

characterized as a point reached by attackers or defenders in terms of time and space after which stated objectives can't be accomplished, and continued efforts to reach them would significantly heighten the risk of failure or defeat. This point is reached when there is a decisive shift in relative combat power.

A point of culmination exists for both attackers and defenders on every level of war. The lower the level, the easier it is to determine. The higher the level, the more complex the influences that cause a culmination of friendly and enemy combat power. Thus a culmination point for either side is difficult to anticipate on the operational or strategic level because of the factors affecting it.

Tactical culmination occurs in the course of a major engagement. It is caused by actions on the scene or decisions on higher levels. Culmination principally relates to the direct application of combat power, which is normally reduced if not regenerated in timely fashion during battle. Failing rejuvenation, a tactical force must stop its actions or continue to fight and risk failure. If a force can prevent or postpone culmination but opts against it, that force facilitates its own culmination.

On the operational level culmination may occur during a major operation or at a given point in a campaign. In the course of a campaign several

culminating points can take place in sequence or simultaneously. Hence possession of the superior position can wax and wane as commanders adjust to the loss of critical capabilities or gain new advantages as combat operations progress.

Strategic culmination arises in the course of war and can be reached only once. In strategic culmination, focus is placed on forces available in the future rather than those on hand. Thus the point arrives when a favorable ratio of military and nonmilitary resources has diminished until the chances for a successful outcome are foreclosed and attackers go on the defensive or risk defeat.

Relationships

Culminating points on various levels of war can affect each other in profound ways. One on a lower level almost invariably affects one on the next higher level. Sometimes a culminating point on the tactical or operational level has operational or strategic implications. For example, the German failure in the all or nothing counteroffensive in the Ardennes during December 1944 had far-reaching strategic consequences. The operational objective was to seize the port of Antwerp by splitting and then destroying Allied forces in the northern and southern sectors of the Ardennes. The Germans planned to commit 28 to 30 divisions—including 12 panzer or panzer grenadier—in a surprise move toward the Meuse River and proceed without delay toward the coast. They hoped to split 1st U.S. Army and British 21st Army Group and destroy them near Antwerp and Brussels. Adolph Hitler wanted to derail the Allied timetable for the thrust into Germany to allow the bulk of his forces in the west to move eastward to defend against the Soviets. The offensive began on December 6 and had some tactical gains. However, it began to lose momentum due to ammunition and fuel shortages. Because of steadily rising losses, Hitler finally admitted on January 8 that the offensive had failed. In the process the Germans lost 100,000 men, 800 tanks, and 1,000 aircraft that could not be replaced, opening the door for the final Allied push into Germany.

Another form of interaction is when attackers or defenders overshoot the culmination point on the higher level by inflicting a major defeat on the next lower level. This is likely when battles result in significant losses in offensive power, thus weakening gains from a previous operation or campaign. For example, the Battle of Midway in June 1942 was an operational victory for Allied forces and an operational defeat with strategic consequences for the Japanese, who lost four large carriers, 332 aircraft, and their best pilots. From then on the strategic initiative shifted steadily.

British tank crews in North Africa.



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Recipe for Defeat

Arrival at the point of culmination can be caused by various factors. On the tactical level, attack or defense can be temporarily overextended by exhaustion on the part of commanders and their forces or depletion of supplies. Among other things, this problem could be solved by simply replacing the commander or entire units, sending reinforcements, or rushing in provisions.

A common cause of culmination on the operational level is the pursuit of multiple objectives without regard for space, time, and force. For example, the decision made by Hitler in July 1942 to pursue two operational objectives simultaneously (the Caucasian oilfields and Stalingrad), which were in divergent directions, was the principal reason for the defeat at Stalingrad and subsequent turning point of the war on the Eastern Front. Hitler specified that the task of Army Group A was to encircle and destroy Soviet forces southwest of Rostov-on-Don and seize the east coast of the Black Sea, thereby taking out the Black Sea Fleet. At the same time fast units would protect the eastward flanks and seize the area around Grozny and block the Ossetian and Georgian roads. Finally,

the group would sweep along the Caspian Sea and capture Baku. Army Group B would build up its defenses on the Don River and thrust toward Stalingrad and destroy Soviet forces, seize the city and crossings along the Rivers Don and Volga, and block traffic on the river. Other units would advance quickly to Astrakhan to block the main waterway on the Volga.

The Germans concentrated an entire army group at one point—Rostov. Hence the chance to encircle still strong Soviet units beyond the Don was missed. In addition, terrain, weather, and fuel shortages worked against the group. By the beginning of August an army of two German and one Romanian corps totaling eight divisions was assigned to support the drive toward Stalingrad, which was to last just over three weeks. Army Group A was directed to concentrate its remaining motorized units for a drive toward Maikop. Hitler overestimated the results of the German summer offensive in southern Russia and became preoccupied with seizing oilfields in the Caucasus, thus neglecting the thrust toward Stalingrad.

Terrain also affects culmination. Defenders can usually use it to deplete advancing forces, like the case of the Soviet offensive in southern Russia in early 1943. Unfrozen rivers delayed the advance by canalizing Soviet attacks. Villages provided defensive positions for the Germans. The mobile units lacked vehicles to advance over inhospitable terrain. Intermittent thaws exacerbated the already tenuous supply situation by turning portions of the countryside into quagmires which bogged down transportation. Although attackers can overcome the effects of terrain by speed and intensity, operating at higher tempo has drawbacks that can degrade attacking forces.

Distance impacts on both offense and defense. The width and depth of a theater can cause dispersal of combat power, a special problem for attackers. For example, the unsuccessful Soviet offensive in southern Russia pursued German troops uninterrupted along a 750-mile long front, which in the south attained a depth of 435 miles. Soviet spearheads became thinner and thinner and eventually came to a halt. Overextension and weakening of Soviet combat power was the main reason the German counteroffensive succeeded.

Time is another factor and it generally favors defense. Defenders seek to delay decisions and use time to increase their relative advantage while attackers must hasten decisions because the passage of time benefits the enemy. Causes of culmination intensify over time and space. These factors interact to bring an attacking force to the point of culmination.

Still another contributor is the reduction of combat power through attrition, possibly exacerbated by fatigue and disadvantage in position, terrain, or weather. Here the culminating point is influenced by the ability to concentrate force at a critical point to gain surprise, shock, or momentum. Another factor is the inability to protect friendly forces. If superior mass is dissipated prior to attaining the objective, the principle of the offensive—the initiative—is foreclosed. Numerical superiority does not ensure success; rather it is the application of superior combat power at the decisive place and time. The Soviets violated the principle of mass repeatedly in offensives by advancing over broad fronts in multiple directions to seize ever-expanding objectives almost simultaneously.

Further, commanders might be overly optimistic or pessimistic in assessing operational or strategic situations. Their perception of enemy capabilities or intentions might be wrong. Or they

might have unrealistic expectations of subordinate commanders or forces. These and similar errors could be significant in reaching or overshooting one's culminating point.

Lack of logistical support is also a cause of culmination; for instance, poor organization of the forward movement of supplies and lack of transportation, ammunition, fuel, or food. Constant combat and overextension of supply lines exacerbate the problem. Ever-lengthening supply lines and corresponding sustainment difficulties were principal reasons for the failure by General Erwin Rommel to continue his offensive beyond El Alamein in 1942. The drive into Egypt culminated in late June because of exhaustion after almost five weeks of continued combat that began at Gazala. By early July German forces were woefully short of manpower, especially infantry. Their line of supplies was some 1,600 miles while that of the Allies from Egypt was roughly 100.

Both attackers and defenders can reach culminating points because of a lack of intelligence. For example, during the first battle of El Alamein in July 1942 Rommel lost his intelligence assets, making it more difficult to determine an accurate picture. A culmination for attackers can also occur when their forces move faster than intelligence support. Commanders and their staffs can reach wrong operational conclusions, although they are otherwise in possession of good intelligence. The Soviet High Command and front commanders completely misread German intentions and capabilities both prior to and during their unsuccessful offensive in southern Russia.

The premature arrival or overshooting of a culmination point is rarely a result of any single factor, no matter how dominant. For example, the Soviets culminated in southern Russia because of logistical difficulties, highly attrited troops and matériel, lack of reserves, poor intelligence, and unawareness of their limitations. Stalin and his generals were too sure of success. A poorly prepared and broad linear offensive was planned along a 750-mile front. No operational reserves existed or were created, forcing the Soviets to pull divisions out of line to meet new operational requirements, thus creating additional vulnerabilities. Commanders also failed to mass whatever combat strength they had, thereby limiting their offensive potential. They allowed depleted divisions to continue to fight ineffectively instead of regrouping the remaining tanks, artillery, and soldiers into fewer but stronger units. Higher headquarters constantly pressured subordinates to maintain the momentum to accomplish assigned missions, resulting in units bogging down in unsuitable tasks. The Soviets also misread operational conditions, wrongly assuming the Germans were retreating. Otherwise they

Destroyed German tank outside St. Vith.



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might have recognized that their own culmination was rapidly approaching.

Methods for Victory

Both sides seek to obtain their objectives before reaching culmination. Attackers must delay their culmination point in time and space while defenders try to hasten it. Attackers can forestall arrival at or overshooting their point by better force protection to lower rates of attrition, maintaining the initiative and high operational tempo, and ensuring timely arrival of reinforcements or commitment of reserves. They can also properly sequence major operations, plan sound tactical and operational fires, and employ operational pauses. In addition, they can apply maneuver, unity of effort, simplicity, and security. An offensive culmination can be delayed by the proper synchronization of logistics, allowing commanders to control the tempo of their actions. This is more important on the operational than the tactical level because of larger factors of space, time, and forces and correspondingly direr

consequences if logistical sustainment proves inadequate. To reach a decision more quickly, commanders might overextend their forces on a temporary basis, but that is always risky. A prudent operational commander should weigh all the factors to measure the importance of success against the chance of failure.

The task of defense is hastening culmination for attackers before they reach their objectives. Among other things, defenders can speed culmination for attackers by inflicting high attrition with combined ground-air attacks. They can derail the attack timetable by offering unexpectedly strong resistance at selected points. They can also interdict lines of supply by striking at road or railroad junctions, depots, or bridges to neutralize vital facilities, thereby causing a ripple effect on logistic infrastructure. Defending commanders who realize that an attack has passed its culmination point can then shift to the counterattack. Attackers must then go on the defensive, but without the inherent advantages of defending.

Given the luxury of waiting, defenders may reduce the strength of attackers faster than their own capabilities while protecting their main

sources of power. But they will eventually approach a defensive culminating point. Then they will no longer benefit from waiting, and their losses yield no further relative advantage over attackers. There is no guarantee defenders will succeed unless they obtain a safe margin of relative combat power. Thus defenders should direct their efforts not only against enemy forces but against elements of their logistical sustainment. The essence of the plan by General Douglas MacArthur to land 150 miles behind the North Koreans by besieging the Pusan Perimeter was cutting off their supply lines, thus bringing on operational culmination faster than through attrition. X Corps not only cut off supply lines but forced the enemy to face threats from two directions. Synchronized with the landing, Eighth Army launched an offensive to break out of the Pusan Perimeter. The impact of the Inchon landing caused the rapid disintegration of the North Korean army.

Another option is trading space for time and preserving combat power while stretching out enemy supply lines. As lines grow they become more vulnerable, compelling an enemy to assign

more resources to defense and thus weakening its ability to advance. Another way to accelerate the point of culmination is by attacking selected modes of transport or requiring an enemy to carry supplies and rein-

forcements by more time-consuming and vulnerable methods. For example, during the Soviet offensive in southern Russia, the Germans focused on attacking enemy railroads, thereby forcing the Soviets to use motor and horse transport.

Guidelines for Planners

When planning an operation or campaign, commanders should analyze all pertinent factors that affect arrival at the culminating point before assigning objectives. The ability to assess combat power is directly related to ability to visualize both the situation and trends in relative combat power weeks or months ahead. The higher the level of command, the broader the perspective must be.

Elements of operational design that directly influence arrival at the culminating point include objectives, sequencing, phasing, reserves, surprise, deception, and center of gravity. Culmination may be avoided by calculating the number and the scale of intermediate objectives and

sequencing. Operational tempo is related to intermediate objectives. The more there are, the slower the tempo. If not properly phased, an operation may culminate too soon. Hence a culminating point could be prevented by planning an operational pause after a given intermediate objective is reached and prior to starting the next one. To maintain momentum, highly mobile second echelon units and reserve forces must be organized and maintained throughout an operation. The proper time for employing them must be anticipated during planning and reassessed in execution. Relative combat power can shift if opposing forces appear when they are not expected by an enemy. Combat power is always more effective when either used in conjunction with surprise or in attacking enemy flanks and rear. An adequate deception plan is also advisable.

Reminders for Commanders

A vital consideration for commanders during execution is sensing the culminating point in order to defeat an enemy before reaching it. For commanders who don't balance ends and means, this decision can cause a mismatch between combat and sustaining resources that might bring culmination before reaching the objective. In any event, precise knowledge of friendly and enemy combat power is needed to reach assigned objectives.

Commanders who are fixated on the current or next engagement will have trouble realizing the culmination of their combat power in a timely way. To succeed they must envision the actions necessary to gain and maintain the initiative. In that way they can anticipate strains and stresses on their forces. Operational commanders must outwit an enemy and be impervious to ambiguity on the battlefield. They should search for weaknesses, bypass enemy strengths, and contain hostile forces. If an enemy reacts unexpectedly, plans should be altered to maintain the initiative.

Intelligence is important in identifying and evaluating indicators of premature culmination. Diverse sources ranging from technical to human intelligence should be used. Among other things command, control, and communications systems should operate in concert with intelligence during the execution phase. Another great challenge is the execution of a maneuver and associated fires. Logistics must continue to work. Moreover, force protection is critical. First and second echelon units and reserves should be fully protected as should rear areas and services.

The inability of commanders to anticipate the arrival of points of culmination has often caused setbacks—even the failure of entire operations. In the first battle of El Alamein in July

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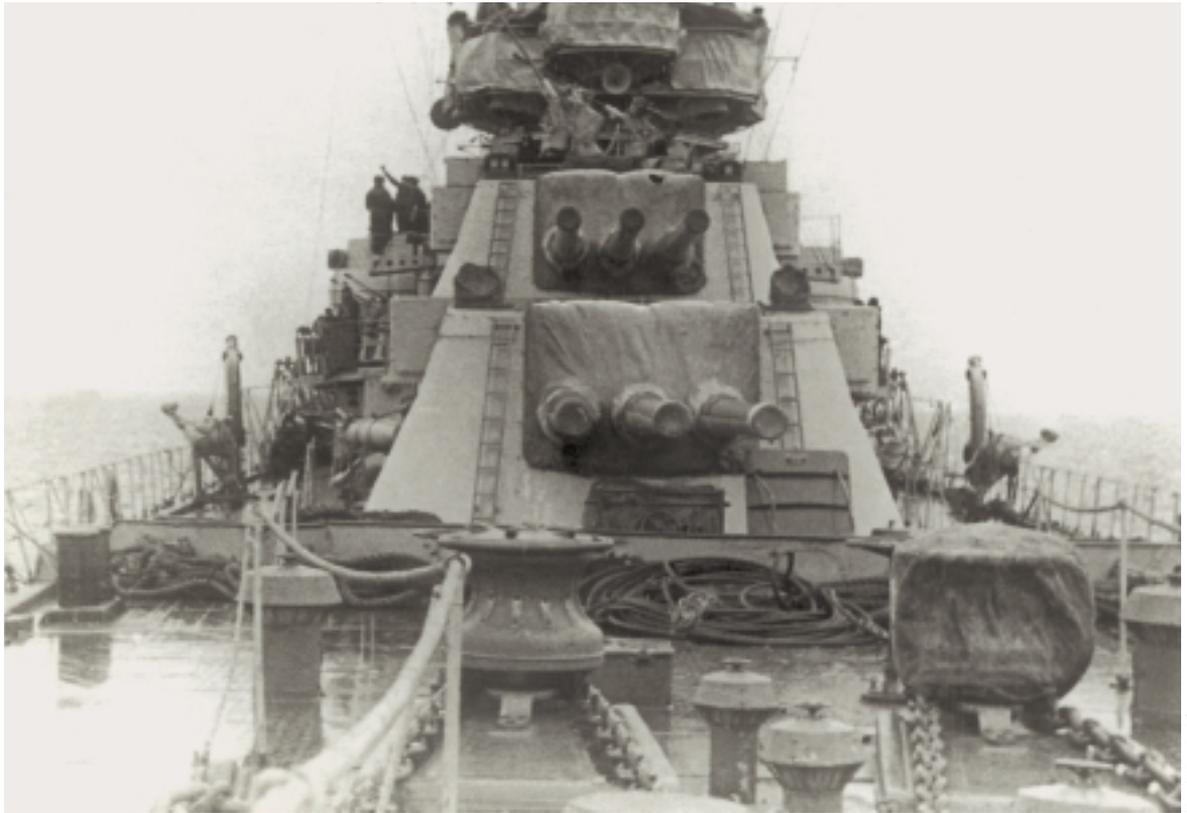
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Unloading men and equipment at Inchon.

1942, the Germans reached their operational culminating point, thus creating preconditions for a British counteroffensive and eventual victory. Yet neither side foresaw or acknowledged the culminating point although indicators were present. Initially Rommel apparently sensed that the British had gained the tactical initiative. He had only 26 operational tanks, stretched supply lines, and exhausted troops and faced increasingly stiff British resistance. Late on July 3 he admitted defeat and gave the order to dig in. For the next few days Afrika Korps repulsed repeated British attacks but with only a slight margin. Rommel still did not acknowledge passing his operational culmination. After several days of rest, he attacked and was repulsed again. The men and matériel he expended were critically needed later in the second battle of El Alamein.

Defenders should be alert to an error by attackers in continuing the offensive after reaching culmination, then exploit the situation or miss the opportunity for victory. In the Franco-Prussian War the Germans reached this point twice without the French noticing. The first instance occurred in September 1870 when the German offensive stalled. By then they had almost half of their army involved in the siege of Paris and the fortress of Metz. About 150,000 German troops surrounded the French capital, but the invasion was delayed because of a lack of siege equipment. At the same time, the Germans faced a threat from fresh armies raised in southern France to relieve the siege of Paris. Miraculously the Germans did not suffer setbacks because the French in

Soviet heavy cruiser
Molotov in Black Sea.



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Metz surrendered by late October, and the Germans resumed the offensive. By mid-December the Germans reached a second culminating point, a rare occurrence in history. The great successes achieved by German armies on the Somme and Loire were not exploited because of lack of forces. The Germans were unable to seize Le Havre, Lille, and Bourges, and instead captured unimportant objectives such as Chartres, Orleans, and Beauvais. Yet the French were unable to take advantage of the situation and the war ended with the fall of Paris.

The concept of the culminating point remains relevant. While its theoretical underpinnings were essentially postulated by Clausewitz, its content has undergone change. The operational level has emerged. The factors affecting culmination are more diverse and difficult to quantify. Thus applying the concept is harder, especially in low intensity conflict when the linkage between strategic and tactical levels is more blurred than in operational warfare. Also, factors that affect culmination are largely unquantifiable. Although theory is critical in sensing the arrival of a culminating point, it doesn't guarantee success. Historical examples facilitate a proper understanding of theory, but they can't provide a path to the future.

Applying this concept requires skill on the part of commanders and their staffs, especially on the operational and strategic levels, because the result of premature culmination or failure to take advantage of enemy culmination are more severe and durable than on the tactical level. Operational commanders must identify factors that cause friendly and enemy forces to reach culmination, then plan action to prevent or hasten the occurrence. Intangible elements of combat power, specifically leadership, morale, discipline, doctrine, and training, remain critical. So operational commanders, who must pay attention to tangible elements of combat power that affect or cause culmination, also must focus on unquantifiable elements that significantly or even decisively affect it.

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