ON MILITARY CREATIVITY

By MILAN VEGO

Admiral Nimitz, commander of Eastern Pacific, briefs President Roosevelt, Admiral Leahy, and General MacArthur, commander of the Western Pacific, on operations advancing toward Japan

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In the public mind, creativity is usually associated with the works of the famous painters, sculptors, musicians, philosophers, and scientists, but not of those in the military. Yet the success in a military domain in both peacetime and in war is hardly possible without considerable creativity on the part of the military institutions as whole and the commanders and their staffs at all levels. War is largely an art, not a science. Hence, it is inherent that military commanders and their staffs must be highly creative in planning, preparing, and employing their forces for combat. While technological innovations should never be neglected, focus should be clearly on those aspects of creativity most directly related to leadership. That is where the outcomes of military actions were determined in the past and it is where they will be determined in the future.

What Is Creativity?

Creativity is perhaps one of the most significant but least understood areas of human endeavor.[1] A great deal has been written about what constitutes creativity, but no theory is completely accepted. One reason is that different fields of knowledge require different factors in combination.[2] *Creativity* can be defined as one's ability to bring something new into existence—to generate novel ideas that are valued by others.[3] It involves one's ability to properly evaluate and present already existing ideas or processes in a different way.

In general, to be creative and novel, a product or the idea behind it must transcend previous concepts or views. A creative product should have a high intrinsic value due to its essential originality and uniqueness.[4] *Originality* is generally defined as any response or

behavior on the part of the individual that is atypical or unusual.[5] A creative idea must be useful and satisfy some need.[6] *Uniqueness* means that a certain idea or a product contains characteristics having nothing alike or equal in existence.[7] A person could have an idea that is unique for him but in fact might be very common. The final result must be something new and uncommon in relation to a particular problem being studied.[8]

Military Environment

The military is a unique profession. It is characterized by the commitment of its members to unlimited service, extending to the risk of life itself. As in no other

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organization, the military trains its members to perform tasks they hope will never need to be performed.[9] It has a strong sense of group identity, and its highly specialized missions and functions have led to a culture that is vastly distinct from society as a whole. A *military culture* is defined as the sum of intellectual, professional, and traditional values possessed by an officer corps.[10]

In contrast to their civilian counterparts, military artists must work within a rather narrow framework and are subject to numerous rules and regulations that must be factored in. All organizations, and the military in particular, tend to be wasteful. They are also subjected to various pressures, both external and internal. These pressures tend to reduce potential leaders to mediocrity.[11] Military culture is generally not conducive to finding a drastic solution to some new challenge. It tends rather either to resist any changes or, in the best case, slightly modify the existing situation.

The main obstacles to military creativity are posed by the military's inherent hierarchical command structure—an authoritarian, bureaucratized system—and its thinking, which is exemplified by conformity, groupthink, parochialism, dogmatism, intolerance, and anti-intellectualism. The military is a highly stratified organization, and its leaders require prompt and unquestioning obedience and execution of orders. Leaders are usually selected without consultation with subordinates. The peacetime environment encourages breeding of officers who rigidly follow rules. Such officers conform to the wishes of superiors and sacrifice their own independence of action by first ascertaining the preferences of their leaders and basing their own conduct on those.[12] This problem is compounded in a military where the officer corps is highly politicized—where ambitious officers try to cultivate personal connections with politicians, which often leads to political interference in military promotions, especially at the highest levels.

The highly centralized and hierarchical command organization reinforces the *authoritarian* tendencies on the part of the higher commanders. Authoritarianism is a major obstacle to the creativity of both individuals and the military institution as a whole. Often, higher commanders are reluctant or unwilling to acknowledge their own failings openly or tacitly. They try to keep the image of infallibility. They also often refuse to learn from their errors.[13] Finding someone to blame for errors and accidents is a common occurrence in a military organization. Authoritarian structures allow pressure only to be applied top-down, not bottom-up. Yet in practice, it is from the bottom that creative ideas are usually generated. B.H. Liddell Hart wrote in his *Memoirs* that "if a soldier advocates any new idea of real importance, he builds up such a wall of obstruction—compounded of resentment, suspicion and inertia—that the idea only succeeds at the sacrifice of himself. As the wall finally yields to the pressure of the new idea, it falls and crushes him."[14]

Like any other large organizations, military institutions are often heavily *bureaucratized*. They force their members to apply numerous fixed techniques and procedures in the erroneous belief that this would enhance effectiveness. Yet it has just the opposite effect because the rank-and-file relies on a fixed routine instead of using judgment and experience. The mission of the institution is increasingly forgotten or ignored. The chiefs of various departments or sections create veritable fiefdoms of power and influence and try to devise ways to protect and expand their authority and power. They are also often resistant to any change because change is considered a threat rather than an opportunity. Hence, any novel idea is usually dismissed as impractical, irresponsible, or absurd. The existing rules and regulations became the ends in themselves.

Another problem associated with bureaucratized thinking is reliance on various checklists and matrices for planning instead of relying on the intelligent judgment

American troops in tanks advance in World War I

U.S. Army

and experience of the commanders and their staffs. For example, the U.S. military widely uses the so-called universal joint task force list, universal naval task list, naval tactical task list, and Marine Corps task list. These lengthy documents aim to replace thinking with ready-made tasks that simply have to be listed. They are the antitheses of creative thinking. For example, the U.S. military has lost its way in writing concisely, clearly, and using plain language by its overuse and abuse of various buzzwords.[15] The use of buzzwords can be intended to impress the audience or readers, win arguments, or grossly inflate the importance of *un*important ideas. By using vague or opaque words, one can give a positive connotation to questionable propositions. Bureaucratized thinking is directly responsible for this sad state of affairs.

Conformism is a major obstacle to creativity in a military organization, especially during peacetime. A given military force has the need for stability, which is ensured by conformity. Within a group, conformity pertains to members changing their personal attitudes and beliefs to align with the beliefs of a group as whole. It is most often the result of a peer pressure. The most extreme manifestation of conformity is so-called groupthink, which exists in small or large organizations when members mimic the thinking of their superiors. Groupthink is the antithesis of creativity.[16]

The very structure of the military is aimed to ensure the maximum conformity of its members. This tendency is further aggravated by the conditions of peacetime service and of human weaknesses.[17] The military organization uses myriad standard operating procedures and regulations to ensure this high degree of conformity. The selection and promotion process is often biased against officers who think and act outside the box.[18] Moreover, many military theorists and practitioners are uncomfortable with the notion that warfare is largely an art and not a science. They consider warfare as destructive and grim while art is beautiful and creative. To allow too much creativity would invariably lead to anarchy.[19]

The military needs the stability of conformity so it can successfully function in peacetime and in war. Yet at the same time it also has a paramount need for creativity; otherwise, it is doomed to failure when a supreme test of war comes. One of the most demanding tests for any military leader is to

appropriately reconcile these contradictory requirements. Experience shows that military organizations that succumb to conformity eventually decline. The enemy essentially only delivers the final blow, as the case of the French army in 1940 illustrates.[20] Around World War I, the Japanese naval academy increasingly emphasized rigorous regimentation and memory work at the expense of originality, individuality, and creativity; the unimaginative emphasis on cramming and rote memory ended any original thinking.[21]

Parochialism within the Services can sometimes be a serious obstacle to creativity. Each Service has a distinctive organization, culture, tradition, and way of warfare. The individual beliefs of Servicemembers are institutionalized through education, training, and socialization.[22] Service parochialism is reflected in the resistance to close cooperation

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with other Services during planning, preparation, and execution of military action. One of the most pernicious effects of strong parochial views is that the Services often do not fully agree on a certain organizational options. This, in turn, has highly adverse effects on the performance of a joint force in combat.

Many militaries are characterized by rigid if not outright *dogmatic* views on many aspects of their activities in peacetime and in combat. This is often the case with military doctrine. Optimally, doctrine should be descriptive, not prescriptive. It should be highly flexible, allowing its application to fit in different physical environments and different fundamental warfare areas. Despite great potential value, doctrine can easily slide into dogma. It can become a substitute for creative thinking about warfare. That is especially the case in an era of rapid technological change. A military doctrine can narrow one's vision by dictating the questions and thereby imposing certain answers.[23]

Prior to World War I, the cult of the offense was dominant in Germany, France, and Great Britain. The prevalent view, based on the experiences of the wars for German Unification (1864, 1866, 1870–1871), was that new weapons gave a decisive advantage to the attacker. Consequently, a future war would be short and decisive. The contrary evidence as provided by the American Civil

War (1861–1865), Russo-Turkish War of 1877–1878, Anglo-Boer War (1899–1902), and Russo-Japanese War of 1904–1905 was simply ignored. These wars showed enormously increased capabilities for defense.[24]

In Germany, the cult of the offensive was glorified. Field Marshal Alfred von Schlieffen wrote that "attack is the best defense."[25] Similarly, the French army was so obsessed with the offensive that it spread to civilians. Marshal Joseph Joffre (1852–1931), chief of the General Staff, wrote that the French army "no longer knows any other law than the offensive . . . . Any other concept ought to be rejected as contrary to the very nature of war."[26] The British military and some other European militaries also believed in the superiority of offense over defense. Many officers in France and Britain also believed that superior morale would overcome superior enemy firepower.[27] Yet after the battle on the Marne in August 1914 and on until the final Allied offensive in the fall of 1918, the clash on the Western Front degenerated into a war of attrition. The high commanders on both sides tried over and over to achieve limited tactical successes and in the process suffered huge casualties.

In the 1920s, there was considerable debate and flexibility about the French army's doctrine. However, that essentially disappeared in the 1930s in part because regression was seen by the French high command as an attack from the left—an infiltration of the army ranks by communist agitators. The French army became more rigid by applying the rules of its doctrine almost without exception, regardless of circumstances.[28] In 1935, General Maurice Gamelin (1872–1958), commander in chief of the French army, tightened the control of military writings and required that all publications receive prior approval; only official views could be presented. In 1934, Lieutenant Colonel (later General) Charles de Gaulle (1890–1970) was refused permission to publish an article in the *Revue militaire française*, and after his pubic campaign for armored offensive tactics, he was taken off the promotion list. Those who challenged official doctrinal views were silenced. Endorsement of official views was the rule. There was no lively debate. Consider, for instance, the Spanish

Civil War. Both German and Soviet military journals devoted enormous attention to the study of that conflict. The *Revue militaire française* rarely covered it, and when it did, it provided little analysis.[29]

French army doctrine was based on a carefully orchestrated attack, rigidly controlled divisional boundaries, and a slow, phased advance in which air, armor, and artillery functioned in tightly controlled harmony. That was exactly the opposite of the German concept of air-land battle

those of superiors. Higher military officers and commanders should avoid setting the tone of professional debate, as it was during the heyday of U.S. military transformation in the early 2000s, and thereby stifling contrarian views. Higher authorities should create an environment that encourages and furthers reasoned debate. Critical thinking should be the norm and not the exception. No military organization can be successful or even survive without a free and open debate on important professional matters.

Experience shows many examples in which independently thinking and creative officers were forced to change or even abandon views because of open or hidden opposition from their superiors. For example, Patton and Eisenhower began to seriously think about armored warfare in 1919–1920. Patton wrote articles for *Cavalry Journal* and Eisenhower for *Infantry Journal*. Eisenhower was summoned by Major General Charles Farnsworth, chief of infantry, and told that his ideas were not only wrong but dangerous. Eisenhower was warned that in the future, his writing should be in conformity with doctrine.[37]

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(Blitzkrieg), which stressed individual initiative, opportunistic exploitations of unexpected openings, and local vulnerabilities in the French lines.[30] Prior to the German invasion in May 1940, the French believed the Germans could not and would not ultimately perform radically differently than their own forces. They refused to see that the enemy had other options. The sense of infallibility was aggravated by an institutional bias against feedback that contradicted existing doctrine or preparations. There was little learning because the high command had all the answers.[31]

In the 1930s and until the raid on Schweinfurt in August 1943, the U.S. Air Corps embraced the theory of strategic bombing as dogma despite growing empirical evidence that this theory was based on false premises. In 1937, the U.S. military attaché in Spain suggested that high-altitude bombing was ineffective and that small tactical bombers and fighters offered the best combat capability. The Air Corps, then in the midst of a funding debate concerning the B-17 bomber, brushed aside the report, arguing that such views contradicted the existing doctrine and hence could not be accepted.[32]

Often, military organizations lack *tolerance* of views that diverge from the so-called mainstream. Yet without tolerance no creativity is possible.[33] Intolerance usually stifles the discussion of professional topics in peacetime, as was the case in the British and French militaries in the interwar years. Ideally, officers and the rank-and-file should be free to express their opinions on professional matters. They should not be ostracized or punished for having views that differ from

Another serious factor detrimental to creativity in the military is the *anti-intellectualism* often generated by an overly authoritarian command structure. An officer with an impressive academic pedigree and/or a scholarly approach to a given problem is often considered a threat because he or she makes the aura of infallibility upon which the prestige of authoritarianism is built dubious. Yet the necessity for intelligent, independent, and creative thinking in war is obvious. At the same time, the cultural obstacles to dislodging the all-pervasive assumption of the infallibility of higher commanders are often very high. Lip service is paid to the need for independent and creative thinking, while it is given short shrift in practice.[34] For example, British Prime Minister David Lloyd George (1916–1922) observed, the "military mind . . . regards thinking as a form of mutiny." Bernard Brodie wrote that soldiers have always cherished the image of themselves as men of action rather than as intellectuals.[35]

In most militaries, there is considerable prejudice against those who seem excessively intellectual. There is the widely held belief that fighting depends more upon muscle than brain and that any display of education is not only bad form but also incapacitating.[36] Yet the most successful military leaders such as Napoleon I, Helmuth von Moltke, Sr., Erich von Manstein, George Patton, Douglas MacArthur, Ernest King, Chester Nimitz, and Raymond Spruance were excellent thinkers and practitioners. The lack of solid professional education and self-education has been one of the underlying reasons for military incompetence.

In Britain, the prevailing attitude in the 19th century and interwar years of the 20th century was a deliberate spirit of amateurism that valued honor, physical courage, skill in field sports, and, above all, one's regiment while deprecating professionalism, schooling, and intelligence. The British military was traditionally against book studies. The preference was character over intellect. This preference has always taken the form of denigration of the staff college graduate[38] and apotheosis of that splendid chap, the regimental officer.[39] For example, General J.F.C. Fuller, while chief instructor at the British Staff College at Camberley in late 1923, requested permission to publish his book on the foundations of the science of war. His request was refused on the ground that the chief of the Imperial General Staff, Lord Cavan, objected to staff officers writing books. Lord Cavan told Fuller that authorship is contrary to discipline for serving officers because it might call the validity of field manuals into question. He also told Fuller not to publish books while he was an instructor. Hence, Fuller asked to reduce his time on the staff from 4 to 3 years in order to publish his work.[40]

Organizational Creativity

In generic terms, *organizational creativity* is best defined as the "creation of a valuable, useful new product, service, idea, procedure or process by individuals working together in a complex social system."[41] In a military context, organizational creativity pertains to significantly enhancing combat effectiveness of one's forces through inventing a novel and unique way of arranging levels of command and their constituent elements and thereby opening the way for a nontraditional employment of one's forces in combat.

Perhaps the most novel and effective way of organizing naval forces for combat is the U.S. Navy's task force concept, used extensively from 1941 to 1945 and still in use today. A task force (TF) was a provisional organization composed of ships and/or submarines and aircraft from different administrative units (squadrons, divisions). It was usually dissolved shortly after the mission was accomplished. The main aim of the TF concept was to enhance operational flexibility. A TF was in turn broken down into several task groups (TGs), and each of these was divided into task units (TUs) with the latter composed of several task elements (TEs). Each TF was assigned a two-digit number (for example, TF 38). TGs, TUs, and TEs were identified by decimal numbers (TG 58.1, TU 58.1.1, TE 58.1.1.2).

Fast carrier groups created in both the Japanese and U.S. navies in the interwar years are another example of how integration of high-strategic mobility and firepower can lead to qualitatively new capabilities through innovative command organization. Carrier groups were capable of theater-wide or operational employment. Another example of successful organizational creativity was the establishment of the first Panzer divisions in the German Wehrmacht in 1935. These divisions included not only tanks but also motorized infantry, artillery, engineers, and signal troops.[42] This concept was not emulated by the French. The Germans continued their innovative approach in the late 1930s by using Panzer units in close cooperation with the Luftwaffe. In March 1940, the Germans also created the first army-size Panzer formation, Panzer Group Kleist, composed of one Panzer corps and two motorized infantry corps and capable of conducting independent major operations in cooperation with the Luftwaffe. Panzer Group Kleist was part of Army Group A and spearheaded the thrust through the Ardennes in May 1940.

Combat Concepts

In time of peace, various tactical/operational concepts are created for the employment of combat forces in case of hostilities. A *tactical concept* is aimed to employ combat forces to accomplish tactical objectives, while an *operational concept* aims to accomplish operational or, in some cases, partial strategic objectives. These concepts form the heart of the respective tactical and Service/joint doctrine. They are used in planning and executing tactical actions and major operations/campaigns regardless of the enemy and the place where these actions would occur.

The Soviet Red Army was the leader in the development of theory of operational art in the interwar years. The Soviets developed the so-called deep battle (*dubokoy boy*) concept in 1935, which envisaged forces no larger than corps attacking the enemy simultaneously over the entire depth of fielded forces.[43] A year later, the Soviets developed and put into their doctrine an even bolder concept of deep operations (*glubokaya operatsiya*) to be applied at the operational level of war.[44] This concept was at the heart of planning and execution of (major) operations conducted by the armies and fronts (army groups) and supported by air and airborne forces to launch simultaneous blows throughout the enemy's entire operational depth.[45] Deep operation was successfully applied in the Soviet offensives on the Eastern Front in 1944–1945.

The U.S. Marine Corps developed an innovative and ultimately highly successful operational concept for conducting major amphibious landings. The document, *Tentative Manual for Landing Operations*, was issued in January 1934. After a series of fleet landing force exercises, it was officially adopted by the U.S. Navy as Fleet Training Publication 167, *Landing Operations*. All U.S. amphibious landing operations in World War II were based on that manual.

The highly successful and novel German air-land battle concept of the late 1930s was relatively simple and highly flexible. The key was using air and ground reconnaissance to locate gaps in the enemy's defenses. Then the weight of main effort (*Schwerpunkt*) would be in that area. The second key element was concentration at the weight of main effort (*Schwerpunktbildung*). Speed, mobility, surprise, and utilization of windows of opportunity were central

U.S. Army

General Eisenhower, Supreme Allied Commander in Europe during World War II

elements in the concept. The Panzer forces would penetrate deeply into the enemy rear. They would have little regard for open flanks. The initial aim was to destroy not enemy troops but command posts and supply lines and to threaten lines of retreat. The key to success was the psychological effect of the fast-moving Panzer forces. Often, entire sectors of a front would collapse even though the Panzers penetrated the front at just a single point.[46]

The Air-Land Battle concept of 1981 was an example of an innovative way to employ the U.S. Army's combat arms and

notions.[52] The best test of creativity is to achieve *surprise*. One of the main methods is a highly innovative deception plan and its skillful execution. Commanders should put themselves in the enemy's shoes and think what course is the least likely the enemy will foresee or forestall.[53] The art of warfare rests on the freest application of its fundamentals under constantly changing conditions.[54]

Making a decision and executing it presumes the need for some degree of creativity on the part of military commanders. A military decision is the result of creative thinking. A military decision is often unique

execution.[58] MacArthur had the rare gift of recognizing the importance of geography and planning his campaigns accordingly. He was well known for his ability to integrate both military and nonmilitary aspects of the situation into his campaign plans. He had the demonstrated ability to think broadly and far ahead. In the initial phase of the Korean War, for instance, his actions were instrumental in saving South Korea from falling under communist rule. After initial setbacks, MacArthur proposed to the Joint Chiefs of Staff a bold and innovative idea to land United Nations forces deep in the rear of the North Korean army at Inchon. The plan was strongly opposed by many officials in Washington because of its high risks. In arguing for his plan to the Joint Chiefs, he stated that he was firmly convinced an early and strong effort behind the enemy's front would sever his main lines of communications and enable U.S. forces to deliver a decisive blow. The alternative was a frontal attack from the Naktong line that could only result in a protracted and expensive campaign to slowly drive the enemy north of the 38th Parallel.[59] In the end, MacArthur's views prevailed; the amphibious landing at Inchon (Operation *Chromite*), some 150 miles behind the North Korean forces then besieging the Pusan perimeter, was carried out on September 15, 1950. The landing was brilliantly executed, and it quickly led to the collapse of the North Korean forces at the Pusan Perimeter.

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air force in a major offensive. It envisaged offensive initial blows carried out from multiple and unexpected directions by both land and air forces against forces deployed in the operational depth of the enemy's defenses. It would be followed by actions aimed at preventing the enemy from recovering. The main idea was to shatter the coherence of enemy forces.[47] Air-Land Battle remained the mainstay of the U.S. Army's doctrine until the late 1990s.

Creativity in Combat

Creativity of commanders refers to their ability to find workable, novel solutions to problems—to be innovative and adaptable in fast moving, potentially confusing situations. All exceptional military leaders have had a large measure of creative skills.[48] A creative intellect allows commanders to surprise enemy counterparts and thus render them impotent.[49] Moltke, Sr., believed that in war, as in art, there are no generally valid norms. In both war and art, rules cannot replace talent.[50] Success in combat at all levels requires imagination on the part of commanders, who should possess a high degree of creativity in thinking and a readiness to take risks.[51]

Creative thinking and *mental agility* refer to commanders' ability to see the whole picture from its individual parts. Leaders should be bold and innovative; they should not use forces in a traditional manner. This means not being fixated on the mechanical or schematic employment of combat forces. To preserve versatility and variability of decisions, commanders should not act according to conventional views and preconceived

and is based on a specific situation that is rarely repeated. Successful commanders should possess a great deal of good common sense, logical thinking, and rational decision-making skills. No plan, no matter how sound, could survive the first contact with the enemy without creativity. Hence, commanders and subordinates must have the mental agility to react quickly when facing unforeseen situations or to take advantage of fleeting opportunities in order to make new decisions based on running estimates of the situation.

The most successful commanders were well known for their unique and creative style in planning and the employment of forces in combat. Moltke, Sr., was renowned for thinking broadly in planning and executing his campaigns in three victorious wars (1864, 1866, and 1870–1871). The key elements in his operational thinking were focusing on meticulous deployment planning, seeking the destruction of the enemy army, giving maximum freedom of action to subordinates, and concentrating forces at the weight of the main effort to effect large envelopments and encirclements.[55] Like Napoleon I, Moltke, Sr., insisted on quick deployment and achieved the greatest victories by concentrating his armies on the battlefield.[56] Moltke, Sr., also had a surprising ability to foresee how a situation would develop and to take the right measures, as he demonstrated in his brilliant victories at Koeniggraetz on July 3, 1866, and Sedan on September 1–2, 1870.[57]

General MacArthur was one of the most successful Allied commanders in World War II. He was known for his thorough planning, boldness of vision, and energetic

Any plan or order should revolve around an overarching idea, known generically as the concept of operations (CONOPS), suggesting how to employ combat forces most decisively to accomplish a given military objective. In operational warfare theory, the term *operational idea* (scheme) pertains to the concept for a major operation or campaign. CONOPS is the heart of any sound plan for the employment of forces. It is developed from the most optimal friendly course of action and is included as an integral part of the commander's decision. A sound CONOPS idea requires ingenuity and creativity on the part of the commander and staff.

A sound CONOPS should describe in broad terms, concisely and clearly, what each force element will do to accomplish the ultimate objective. Among other things, CONOPS should avoid traditional patterns. It should be bold and novel and be speedily executed. It should pose multidimensional threats the enemy has little or no chance of

countering successfully. It should surprise and deceive the enemy, further complicating his response. Most importantly, it should be directed at the destruction or neutralization of the enemy's center of gravity.[60]

An example of a creative operational idea was the German campaign in Denmark and Norway in April 1940 (*Unternehmen Weseruebung*—Weser Enterprise) and preceding the first phase of the German campaign in the West from May to June 1940 (Plan Gelb-Yellow). For example, the German operational idea for the invasion of Denmark and Norway in April 1940 was innovative. Never before had anyone attempted to seize positions separated by a wide sea area without obtaining command of the sea first. The Germans envisaged simultaneous and multiple thrusts by ground, sea, and air elements to quickly seize southern Norway and then move north under the protective shield of the Luftwaffe. The operational idea was also bold, and the Germans took rather high risks to mount such a large-scale effort in the face of British superiority at sea and its ability to react quickly to any German landing in Norway. At the same time, the Germans maintained a high degree of operational security, using deception and concealment.[61]

In the first phase of their campaign in the West in May 1940, the Germans used combined penetration and single-sided envelopment maneuvers to cut off and destroy the major part of the Allied forces deployed in northern France and Belgium. It was General Erich von Manstein's idea to combine single-sided envelopment with penetration. He selected the Sedan-Dinant sector as the point for a tactical penetration maneuver. This would be followed by an operational single-sided envelopment maneuver extending all the way to the French Channel coast. The aim was to avoid making a frontal attack on the Allied forces as they moved into Belgium, and rather to cut them off in the rear of the Somme River.[62]

The Allied campaigns in the Pacific during World War II were successful because they included, among other things, some highly creative ideas. In the so-called island-hopping approach, as exemplified by the New Guinea, Solomons, and Central Pacific campaigns, the Allies attacked enemy weaknesses and avoided enemy strengths. That, in turn, greatly enhanced the Allied operational tempo and thereby never allowed the Japanese to recover from their losses.

Not all Allied concepts of operations were creative. In fact, many were quite ordinary. For example, in both the Pacific and European theaters in World War II, the Allies used similar and highly predictable operational ideas for their amphibious landings. That made it considerably easier for the enemy to deduce Allied intentions. It did not lead to defeats largely because the Allies had enormous superiority on the ground, at sea, and in the air in most of the landings conducted. For example, the Japanese, by closely observing and analyzing U.S. amphibious landings, changed their method of conducting antiamphibious defense from defending the beaches to digging in and establishing several defensive lines farther from the beaches. In that way, they countered superior U.S. firepower and maximized their own advantages. For example, after U.S. troops landed on Okinawa in April 1945 (Operation *Iceberg*), the Japanese offered stubborn resistance in the interior of the island. By the time the last resistance ended in late June 1945, the Japanese had lost 110,000 men in combat, but they also inflicted heavy losses on the attacker: U.S. battle casualties were 49,000 including 12,500 killed or missing.[63]

Deception is one of the most important supporting plans. Successful deception is the product of an imaginative story: a series of actions and measures aimed to manipulate enemy intelligence channels so the deception target—the enemy commander—believes what one desires him to believe. Building a story is one of the most complicated yet critical parts of deception planning. The most effective deception story reinforces the enemy's belief in what he already expects, underscoring the critical role of detailed and accurate knowledge of the enemy's perceptions and beliefs that is obtained by intelligence. Experience has shown the great value of using the work of artists such as playwrights or novelists in providing ideas for a deception story. Artists often have more fertile and imaginative ideas than professional officers. For example, many members of the British wartime intelligence apparatus were unorthodox personalities. Ian Fleming, personal assistant to admiral Sir John H.

Godfroy, director of naval intelligence, later became known for his James Bond novels.[64] In addition to Fleming, Godfroy's naval intelligence department employed a schoolmaster, journalist, collector of books on original thought, Oxford classical don, barrister clerk, and insurance agent along with two regular naval officers, two stockbrokers, and several women acting as assistants and typists. [65]

Conclusion

Creativity is the key element in the successful planning, preparation, and execution of a combat action and ultimately in winning a war. It is directly linked to the art side of warfare, so it requires thorough knowledge and understanding of the true nature of war. Creativity in peacetime is essential to developing sound military organizations, operating concepts, and doctrine, and to educating and training future commanders and their staffs. The need for technological creativity should not be confused with the

CONOPS should pose multidimensional threats the enemy has little or no chance of countering successfully

cognitive aspects of creativity. Experience shows repeatedly that novel technologies by themselves are insufficient to win victories and ultimately wars. New technologies must be followed by creative, corresponding changes in force organization.

The single most important factor is sound integration of new technologies and creative operating concepts and doctrine; otherwise, ultimate success will be wanting. In contrast to the environment for artists and scientists, the military environment poses formidable obstacles to creativity at all levels. Thus, it is incumbent at the highest levels of military and political leadership to create a climate and provide adequate resources for creativity and experimentation. Only through the open and vigorous struggle of competing ideas is it possible to develop and apply sound operating concepts and doctrine. A military organization that restricts or, worse, does not allow free professional discussion is doomed to stagnate in peacetime and to eventually fail in combat. Finally, the German-style mission command should be adopted and applied in both letter and spirit so as to educate and train commanders and staffs to think and act creatively. **JFQ**

NOTES

1 Jeffrey Maitland, "Creativity," *The Journal of Aesthetics and Art Criticism* 34, no. 4 (Summer 1976), 397.

2 Marshall Dimock, "Creativity," *Public Administration Review* 46, no. 1 (January–February 1986), 4.

3 Cited in Ronald D. Daniel, *Creativity and Strategic Vision: The Key to the Army's Future* (Carlisle Barracks, PA: U.S. Army War College, 1993), 4–5.

4 Harold H. Anderson, "The Nature of Creativity," *Studies in Art Education* 1, no. 2 (Spring 1960), 10.

5 Norman E. Wallen, "Creativity—Fantasy and Fact," *The Elementary School Journal* 64, no. 8 (May 1964), 439.

6 Irvin Summers and David E. White, "Creativity Techniques: Toward Improvement of the Decision Process," *The Academy of Management Review* 1, no. 2 (April 1976), 100.

7 Dimock, 3.

8 J. Nazareth, *Creative Thinking in Warfare* (New Delhi: Lancer, 1987), 3.

9 Cited in Amos A. Jordan and William J. Taylor, Jr., "The Military Man in Academia," *Annals of the American Academy of Political and Social Sciences* 406 (March 1973), 130.

10 Williamson Murray, "Innovation: Past and Future," *Joint Force Quarterly* 12 (Summer 1996), 54.

11 Nazareth, 39.

12 Ibid., 41.

13 Ibid., 43.

14 Cited in ibid., 45.

15 Kate Bateman, "War on (Buzz)Words," *Proceedings* 134, no. 8 (August 2008), 22.

16 Charles D. Allen and Stephen J. Gerras, "Developing Creative and Critical Thinkers," *Military Review*, November–December 2009, 80.

17 Nazareth, 41–42.

18 Charles D. Allen, *Creative Thinking for Individuals and Teams* (Carlisle Barracks, PA: U.S. Army War College, 2009), 3.

19 James Mrazek, *The Art of Winning Wars* (New York: Walker and Company, 1968), 33.

20 Nazareth, 41.

21 Sadao Asada, *From Mahan to Pearl Harbor: The Imperial Japanese Navy and the United States* (Annapolis: Naval Institute Press, 2006), 163.

22 Brooks L. Bash, "Leadership and Parochialism: An Enduring Reality, *Joint Force Quarterly* 22 (Summer 1999), 64.

23 Jay Luvaas, "Some Vagrant Thoughts on Doctrine," *Military Review*, March 1986, 60.

24 Stephen van Evera, "The Cult of the Offensive and the Origins of the First World War," *International Security* 9, no. 1 (Summer 1984), 58–59.

25 Ibid., 59.

26 Ibid.

27 Ibid., 61.

28 Elizabeth Kier, *Imagining War: French and British Military Doctrine Between the Wars* (Princeton: Princeton University Press, 1997), 83.

29 Cited in ibid., 86.

30 Irving B. Holley, *Technology and Military Doctrine: Essays on a Challenging Relationship* (Maxwell AFB, AL: Air University Press, 2004), 25.

31 Murray, 57.

32 Robert F. Gass, *Theory, Doctrine, and Ball Bearings: Adapting Future Technology to Warfare* (Fort Leavenworth, KS: School of Advanced Military Studies, January 1996), 31, 33.

33 Edwin R. Micewski, "Creativity and Military Leadership in Postmodern Times," paper presented at the International Conference for Interdisciplinary Creativity in Science and Technology, Bucharest, February 25–26, 2005, 5.

34 Nazareth, 44.

35 Lloyd J. Matthews, "The Uniformed Intellectual and His Place in American Arms, Part I: Anti-Intellectualism in the Army, Yesterday and Today," *Army*, July 2002, 18–19.

36 Gabriel Serbu, "The Dangers of Anti-Intellectualism in Contemporary Western Armies," *Infantry*, November/December 2010, 44.

37 Nazareth, 45.

38 Matthews, 18.

39 Correlli Barnett, "The Education of Military Elites," *Journal of Contemporary History* 2, no. 3 (July 1967), 18.

40 Nazareth, 45.

41 Richard W. Woodman, John E. Sawyer, and Ricky W. Griffin, "Toward a Theory of Organizational Creativity," *Academy of Managerial Review* 18, no. 2 (April 1993), 293.

42 Cited in Williamson Murray, "Armored Warfare: The British, French, and German Experiences," in *Military Innovation in the Interwar Period*, ed. Williamson Murray and Alan R. Millett, 42 (Cambridge: Cambridge University Press, 1996).

43 Richard W. Harrison, *The Russian Way of War: Operational Art, 1904–1940* (Lawrence: University Press of Kansas, 2001), 188–194.

44 Wayne A. Parks, *Operational-Level Deep Operations: A Key Component of Operational Art and Future Warfare* (Fort Leavenworth, KS: School of Advanced Military Studies, 1998), 24–25.

45 Harrison, 194–195.

46 Karl-Heinz Frieser, *Blitzkrieg-Legende: Der Westfeldzug 1940* (Munich: R. Oldenbourg Verlag, 1995), 419–420.

47 Field Manual (FM) 100-5, *Operations* (Washington, DC: Headquarters Department of the Army, August 1982), 2-1.

48 FM 22-103, *Leadership and Command at Senior Levels* (Washington, DC: Headquarters Department of the Army, July 31, 1990), 30.

49 Mitchell M. Zais, *Generalship and the Art of Senior Command: Historical and Scientific Perspectives* (Fort Leavenworth, KS: School of Advanced Military Studies, 1985), 49.

50 Hans Speth, *Auswahl, Erziehung und Ausbildung der Generalsbsoffiziere im Frieden und im Kriege* 19, MS # P-031b, Part 19, ZA/1 1867, Studien der Historical Division Headquarters, United States Army Europe, Foreign Military Branch, Bundesarchiv/Militaerarchiv (BA-MA), Freiburg, i.Br., 10.

51 *Fuehrungsakademie der Bundeswehr, Arbeitspapier* (working paper), *Operative Fuehrung* (Hamburg, 1992), 18.

52 Ibid.

53 B.H. Liddell Hart, *Strategy* (New York: F.A. Praeger, 1954), 348.

54 Friedrich von Bernhardi, *On War of To-Day*, vol. 2, *Combat and Conduct of War*, trans. Karl von Donat (New York: Dodd, Mead, 1914), 413.

55 John English, "The Operational Art: Development in the Theories of War," in *The Operational Art: Developments in the Theories of War*, ed. B.J.C. McKercher and Michael A. Hennessy, 9 (Westport, CT: Praeger, 1996).

56 Charles A. Willoughby, *Maneuver in War* (Harrisburg, PA: Military Service Publishing, 1939; reprint Headquarters U.S. Marine Corps, 1986), 118.

57 Roland G. Foerster, "*Die operative Denken Moltkes des Aelteren und die Folgen,*" in *Ausgewaehlte Operationen und ihre militaerhistorischen Grundlagen*, ed. Hans-Martin Ottmer and Heiger Ostertag (Bonn/Herford: Verlag E.S. Mittler & Sohn, 1993), 263.

58 D. Clayton James with Anne Sharp Wells, *Refighting the Last War: Command and Crisis in Korea 1950–1953* (New York: Free Press, 1993), 30.

59 Ibid., 162.

60 Walter A. Vanderbeek, *The Decisive Point: The Key to Victory* (Fort Leavenworth, KS: School of Advanced Military Studies, 1988), 39.

61 Olivier Desarzens, *Nachrichtendienstliche Aspekte der "Weseruebung" 1940* (Osnabrueck: Biblio Verlag, 1988), 173; T.K. Derry, *The Campaign in Norway* (London: Her Majesty's Stationery Office, 1952), 232.

62 Guenter Roth, "*Operatives Denken bei Schlieffen und Manstein,*" in *Operationen und ihre militaerhistorischen Grundlagen*, 292–293.

63 Roy Appleman et al., *The War in the Pacific: Okinawa: The Last Battle* (Washington, DC: Center for Military History, 1948, reprint 1991), 473.

64 Ben Macintyre, *Operation Mincemeat: How a Dead Man and a Bizarre Plan Fooled the Nazis and Assured an Allied Victory* (New York: Harmony Books, 2010), 11.

65 Ibid., 30.