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Operational Art—Quo Vadis ?

MONOGRAPH
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ABSTRACT

Operational Art – Ouo Vadis? By COL Fritz Gawehns, GEA, 56 pages.

Operational art, subject to a transformation of meaning over time, is today more a vaguely defined phenomenon than a clearly defined term. On the whole, the concept of operational art is the result of the hierarchical organization of warfare derived from practical experience rather than the product of a thorough theoretical analysis.

This study is designed to empirically approach the nature of the interpretation of operational art through the lens of military history. The focus is an examination of operational art against a background of era-related historical experience to determine the consistency and change in operational art since World War I and the factors responsible. The application of this analysis perhaps will provide practical answers to the challenges of modern warfare. The industrialized, modern war is characterized by a reduction in the significance of purely military factors. Simultaneously, the dependence of warfare on the economic and technological potential of society has increased. The destruction or attrition of military resources is only one factor impacting operational art and its contribution to the decision of war.

Out of the many considerations, time, space and technology are the greatest influence on the determining factors of operational art. This study demonstrates that the concept of operational art cannot be developed from the nature of war, as is the case with strategy and tactics. Operational art has undergone a considerable change since WWI in terms of meaning and interpretation. While tactical and strategic functional fields can be clearly separated in terms of concept and notion, this does not apply to the conduct of operations. Operational art depends, on the one hand, on the conditions tactics offer, while; on the other hand, it is dominated by strategic circumstances. The reality of a future war coupled with strategic conditions and goals is subject to permanent change. Thus, operational art has to cope with external questions of whether to orient operations to fast speed and a quick decision or toward long duration and delay of the decision, or whether comprehensive physical destruction or a psychological effect is sought. Clearly, there can be no systems of rules or doctrine for operational art.

Operational art oscillates between a pressure for change, which requires flexibility, and impartiality, and a striving for continuity. In the past, nations, which engaged in intensive dialogue between politico-strategic control and operational art, were particularly successful in dealing with this dilemma. Applying the lessons learned from previous successful campaigns will not ensure success in future operations.

Being subject to a transformation of meaning over time operational art is even today more a vaguely defined phenomenon than a clearly defined term. On the whole the concept of operational art is the result of a hierarchical structurization of warfare which is derived from practical experience rather than the product of a thorough theoretical analysis.

Therefore the study is designed to empirically approach the nature, the interpretation of operational art by way of a consideration based on military history. The focus is on consistency and change of operational art since World War I and the factors responsible for that and examine examples of operational art against the background of era- related historical experience to find practical answers to the challenges of modern warfare. The industrialized, modern war is characterized by a reduction of the significance of purely military factors. The dependence of warfare of the economic and technological potential of society has further increased. By means of destroying or attriting the military resources, operational art only makes a contribution to the decision of war.

This study attempts to show that the concept of operational art cannot be developed from the nature of war, as in the case with strategy and tactics. Operational Art has undergone a considerable change in terms of meaning and interpretation. While tactical and strategic functional fields can be clearly separated in terms of concept and notion, this does not apply to the conduct of operations. While it depends on the one hand on the conditions tactics offer, it is dominated on the other hand by strategic circumstances. At the level of operational command and control it is attempted to cope with these two parameters and the element of continuous change is seen as determining factor. Both the reality of a future war and the strategic circumstances, conditions and goals are subject to permanent change. Thus, operational art has to cope with external questions as to whether operations are to be oriented to fast speed and a quick decision or toward long duration and a delay of the decision, whether comprehensive physical destruction or a psychological effect is sought. This makes clear that there can be no systems of rules or doctrine for operational art.

Today operational art oscillates between a pressure for change, which requires flexibility, and impartiality, and a striving for continuity. In the past, the nations in which an intensive dialogue between politico- strategic control and operational art took place were particularly successful in dealing with this dilemma.

CHAPTER ONE

INTRODUCTION

Operational art has become a key concept when it comes to analyze the issue of command and control in military conflicts. But the meaning of the term "operational art" is neither obvious nor unambiguous. A particularly well-known theoretical concept is Clausewitz' approach which subdivides military command and control into the fields of strategy and tactics. This approach does not seem to leave any room for an operational command and control level. For Clausewitz defines strategy as "*the doctrine of the use of engagement for the object of the war,*" whereas tactics is "*the doctrine of the use of armed forces in the engagement.*"[1] With the increasing complexity of political leadership and management systems, of decision-making processes and the military system, too, the number of terms increased: Among others, the concept of operational command and control was complemented by the concepts of military strategy, overall strategy, defense policy and security policy. However, this neither helps to make things clearer nor is there any uniform usage: Liddell Hart's definition of strategy in 1967 is still very similar to Clausewitz' definition: "*The art of distributing and applying military means to fulfill the ends of policy.*"[2] But by 1984 the Americans have come to understand military strategy as follows: *The art and science of employing the armed forces by the application of force, or the threat of force,*"[3] whereas the Soviets defined their concept of operativnoye iskusstvo: "Stemming from strategic requirements, operational art determines methods of preparing for an conducting operations to achieve strategic goals."[4] It is obvious how much terms and definitions overlap. It may have been for some reason that Moltke, who from a historical perspective can be called a

father of operational art, did without an own definition of operational command and control.[5] Moreover, the difficulty of finding a term is not exactly made easier by the fact that the meanings of the terms distinctly shift over time. While the Red Army's aforementioned definition of operational art dates back to 1978, operational art in 1945 was confined to "an organized totality of actions of large troop formations joined by an overall plan and directed toward the execution of a particular aim of a campaign of war.[6] These changes are also due to the fact that the definition of the term frequently entails a definition of power and responsibilities, and the transformation of concepts reveals a shift of the real balance of power. Being subject to a transformation of meaning over time, operational art nevertheless is a term which is frequently used in practice, in particular by military personnel. On the whole, the concept of operational art is the result of a hierarchical structurisation of warfare which is derived from practical experience rather than the produce of a thorough theoretical analysis. Accordingly, what we have here is a vaguely defined phenomenon rather than a clearly defined term.

This situation involves the risk that military-history studies are based on an anachronistic concept of the term. In the following, the terms will be confined to the fields of strategy, operational art and tactics. For it is an established fact that operational art in modern warfare is situated between politico-strategic control and tactical command.[7] Operational art is to be understood as the arrangement and connection of engagements for the achievement of the objective of war in a theatre of war.[8] Hence operational art is an instrument of strategy, just like tactics becomes an instrument of operational art.

In the light of the difficulty of grasping operational are in theoretical terms as a term and a phenomenon the following study is designed to attempt to empirically approach the nature, the interpretation and the application of operational command and control by way of a consideration based on military history. In this context, the focus of attention will be primarily on the issues of consistency and change in the concept and exercise of operational art since World War I as well as on the factors that are responsible for that. The purpose of the study is to examine examples of operational art against the background of the era-related historical experience. In this context, each individual example represents a more or less successful practical answer to the challenges of industrial warfare. Thus, considered in total and in the course of development over time, central issues of operational art can be identified.

Concepts for military command and control are era-related. Even though elements of operational art can be identified in retrospect considerations of campaigns that took place a longer time ago, it is nevertheless a product of modern warfare from the perspective of the acting officers. It is above all the result of a hierarchical structurisation and a work-sharing approach of military command and control, which had its origins in three developments:

(1) the emergence of the modern nation-state with detailed political leadership and management and decision-making structures.

(2) the industrialization of these states combined with a considerable growth of the population and profoundly changing societies, and

(3) the accelerating technical progress which revolutionised the pattern of war.

These developments were already effective as early as in the 19th century, but it was not until World War I that their significance for warfare became evident on broad scale.

CHAPTER TWO

THE INFLUENCE OF TECHNOLOGY AND TECHNICAL CHANGE ON OPERATIONAL ART

The achievements of modern technology of the battlefield "*virtually impose themselves on the serviceman.*"[9] This is how Guderian saw it in one of his publications in which he championed the comprehensive mechanization of warfare. And other military leaders such as the Britons Fuller and Liddell Hart or the French Estienne and De Gaulle shared this view. Since World War I, the reality of combat has been shaped without any doubt by technical progress, and the competition driven by the dynamics of military confrontation displays two different phenomena: What can be observed on one hand is the competing optimization of the weapon systems in the form of an armament spiral. What is less frequent is the phenomenon of an arms-technology leap which provides each side with a considerably superior weapon system.

The arms-technology spiral becomes evident in a continuous pressure to develop anew and introduce improved weapons. The development of the German and Soviet tank types are a typical example of such a spiral. The attack against the Soviet Union displayed the superiority of the Soviet T-34 and KW-1 tanks in terms of armament, armor and maneuverability. On the German side, the development of tank types began, which resulted in the fielding of the 'Tiger' and 'Panther' tanks starting in 1942. At the same time, the tank types that were already used were upgraded by means of providing them with bigger guns and reinforced armor. Thereupon the Soviets also improved their tanks using even bigger caliber's and improving their armor protection. The result was increasing maneuverability and enhanced firepower on both sides.[10]

In World War II such spirals can also be observed in other domains such as, for instance, the development of fighter aircraft and the radar sector. However, the extent of the response to the pressure caused by this spiral differed. The Americans retained their inferior 'Sherman' tank although they had technically superior prototypes, because they could keep up the high production rates only if the stuck with that type. A similar approach could be observed in connection with the German fighter production program in 1944 when initially the mass production of the revolutionary new design of a jet fighter was waived.

The construction of the Maginot line as a defense infrastructure which was optimized in terms of arms technology can also be considered to be a result of such a spiral. Here the ability to bottleneck an enemy in a desired area and to destroy him under conditions most favorable to the defense force was brought to perfection- Likewise, the conventional arms race between NATO and the Warsaw Pact showed that this spiral also works in peacetime in case of an only potentially military confrontation.[11] It results in peacetime and in war in a continuously changing imbalance of arms- technology capability. Since the principles of tactical command and control are supposed to display this situation, if possible, this results on the one hand in constant high pressure on the military leaders to adjust, which is responsible for an increased demand imposed on the quality of tactical command and control. On the other hand, there is now a state of permanent uncertainty as to the reality of future combat, its dimensions and its requirements. This cannot be without any importance for operational command and control which is supposed to combine engagements, since the uncertainty also spreads to the operational environment.

However, it must be noted that the superiority in terms of arms technology of one side rarely decided an operation or a war. First, there is a paramount balance due to the continuously changing imbalance of arms technology, which often eventually results in an advantage for the side with superior strategic resources. Moreover, the arms-technology advantage in most cases is so small that they are compensated by advantages offered by other weapons or by skillful command and control which takes into account strengths and weaknesses. The inferiority of German tanks in terms of armament and armor protection did not impair their success n the campaign in France in 1940. Instead, the Germans enjoyed a kind of superiority which was not based on arms technology but increased essentially their tactical efficiency – it was the fact that they had radio communications down to the individual tank. The flexible command and control which thus became possible made the German tank units superior to their adversaries in 1940 and 1941.[12]

A more decisive effect was to be expected from a technological leap which provides a unilateral edge. Again and again the efforts and hopes were put on such weapon systems, be it the introduction of the jet fighter on the German side, the ballistic missile, or modern precision guided missiles. Yet such an event can rarely be observed in reality. First of all, this is due to the fact that revolutionary technology cannot be transferred immediately to the production line, and if so it can only be produced in minor quantities. Secondly, it has proved difficult to transfer complex weapon systems immediately from development to tactical employment, since first of all the optimum use of the new weapon has to be tested. Accordingly, the jet fighter was not available in time to bring about a turnaround of the air war in World War II.[13]

The use of guided missiles represents a significant leap of arms technology. The first prerequisite for that was an operational radio technology. The first models had already been employed in World War II when remote-controlled German glide bombs sank the Italian battleship Roma in 1943.[14] Then an advanced electronic system was the second prerequisite which brought about the definite breakthrough of the guided missiles. The appearance of small, mobile guided missiles in the Yom Kippur War of 1973 considerably changed the relationship between offensive and defensive operations when the defense forces were able to accurately engage enemy tanks at long distances. After substantial losses, this entailed a review of the tactical doctrine on the Israeli side.[15] The introduction of surface-to-surface guided missiles, which enabled very small units to attack much larger and so for unattackable ships, had a similar effect. The capability of firing guided missiles such as the Exocat from aircraft forced the British in the Falklands War to adjust their tactics to this threat.[16]

Without any doubt, the strongest leap in the history of modern warfare is the nuclear bomb. And even if its tactical employment had been planned for some time, it nevertheless had little influence on the fundamental principles of the engagement. Apart from that, the phenomenon of an arms-technology leap is rarely as important as one would believe at first, since under the complex conditions of industrial warfare individual weapon systems can hardly be effective enough to override the effects of all the other weapons. This applies both to the leap and the spiral.

Since World War I the image of combat has been undergoing continuous change. Therefore, the tactical doctrine is subject to a continuous increase of the technical capacity of the available weapons. This results in an extension of combat in terms of

space and time, with combat being subdivided in turn into minor engagements. In addition to the classical engagement on the ground or at sea, engagements including the third dimension have come into play- Tactical command and control became much more complex and had to meet beyond that the requirements facing logistics and the command and control systems, which had increased many times over. This required expert knowledge with regard to the specific problems of tactical command and control, which is made evident by the substantially expanded HQ staffs at the tactical level. In this context, the experience and the work routines of the operational staffs that already existed were referred to as a model.

Due to the increasing complexity of tactical command and control, it is reasonable in terms of work procedures to differentiate it from operational art. On the other hand, it is exactly this complexity which blurs the differences in terms of content between those who command and control the forces in combat and those who combine these engagements for an operational purpose.

After considering the influence of technical progress on tactical command and control and the consequences for operational art, the study will now examine to which extent this influence also has an immediate effect on operational art. In this context, it is important to note that one source of operational art has its very roots in technical progress. The development of the railway and of telegraphy created new conditions for the command and control of large troop formations which differed from the previous tactical problems. The complexity of organizing and planning large-scale movements increased considerably, which resulted in the development of specific work procedures and facilities used to work on these tasks, Operational art comprised in particular the

fields of mobilization as well as deployment and approach planning. The employment of the railway for military purposes was the first step towards mechanized warfare.[17]

Thus, operational art was closely linked from the outset with the issue of mobility. After World War 1, people realized that it was possible to release operational movements - including their logistic component - from their dependence on the railway by way of using motor vehicles. This was considered to be a big opportunity to increase the mobility of the armies and to put an end to the disproportion between the rate of an operational redeployment and other operational movements in the operational theatre. Therefore, even operational-minded military leaders supported the approach of mechanisation as proposed by tacticians and technicians.[18] In fact, the mechanisation of major units enabled them to distinctly increase their operational mobility.[19]

However, one side affect was the change of the fundamentals of operational planning. The logistic system, which had to support the movements of these mechanised major units, had to be much more extensive than with the previous units. And it was added to the increased logistic requirement which had already been caused in the tactical field as a result of technical progress. The complexity of the function of command and control increased due to the dependencies on central logistic support and the complicated processes of supply and maintenances of the technical equipment.

The opposite aspect of the opportunities offered by the mechanisation of operational command and control was an increased vulnerability due to the increase of logistic units and given their decisive importance for operational mobility.

Logistic support facilities virtually offered themselves as objectives of operational importance. Any action against the lines of support could ruin the ability to operate and even destroy in the long run the capability of commanding and controlling engagements. This afforded a new quality to the lines of communication of an army. The classical operational movement was directed against the enemy's lines of withdrawal. Thus the adversary could be forced to engage in a battle, since he was unable to withdraw.[20] Now the lines of operation were necessary not only for the movement of the forces but indeed for their logistic -support. If they were interrupted in any way, the adversary lost his capability of fighting at all. This approach had been known for a long time already in the form of blockades from naval warfare.[21] The actions of Soviet partisans before the 1944 summer offensive, which were directed against railways and bridges and were designed to meet that purpose, may serve as an example. The interdiction of the operational theatre during the Battle of the Bulge offensive in 1944 shows that air power is a particularly effective instrument for that kind of task, Deprived of their logistic communications, the Germans were no longer able to continue their mechanized offensive operation. [22]

The use of the third dimension by air power further extended the spectrum of operational action. Similar to the tactical level, the complexity of planning was increased by the coordination of the various rates of operation. Assessing the potential of air assets proved to be difficult, since there were considerably differing concepts regarding the use of the increasing variety of options, which range from army-dominated thinking as it prevailed in the Wehrmacht up to the competition about resources among the U.S. services. But difficulties arise at a lower level, too. The combination of the land and air forces for the preparation of the invasion in 1944 is summed up as follows in the official

historiography-. *"The most difficult single factor - from a military perspectiwe - during the planning period was the loss of time in the course of decision-making and the build-up of the command and control organization for the allied air force. (...) the implications became clearly evident within the scope of operational planning of the invasion forces.*[23] Such problems of cooperation are all but rare,[24] and they show that the objective of destroying the enemy by no means is sufficient from the outset as a common link for joint action of complex military systems. Again and again the central issue of these confrontations was the wish to pursue different operational approaches due to differing perspectives.

The task of commanding and controlling operational movements has become more complex and more difficult. The extended options are confronted with additional constraints, dependencies and interactions. Just as in the field of tactical command and control, an appropriate expertise system is developing at the headquarters at the operational, too. The military did not respond to the increased complexity and difficulty of the task of planning, command and control by searching for the reasons of the lack of cooperation but by developing a paramount operational doctrine which simply presupposed the search for the decision as the operational objective. As a matter of fact, it was possible this way to improve the cooperation of the individual assets, which became more and more effective in technical terms, within the scope of mechanized, three-dimensional operations. The ability to defeat an adversary by the use of military force – concentrated both in terms of time and space – was enhanced, but the operational thinking became independent as a result of the optimization of military command and control, since the variety of perspectives of thinking was reduced in order to achieve an operationally effective unity of action.

Technical progress had brought about the capability of projecting fire well beyond the border of the actual combat zone deep into the enemy force. This calls for a discussion of the possibility of operational employment. In this context, there can be no doubt about the fact that the line between operational and tactical fire is fluid anyway. The two dimensions will be displayed using as an example the aerial bombardments for the breakthrough at Sedan in 1940. The fire which the German divebombers directed against the French positions on 13 May 1940 without any doubt had a tactical objective, i.e. to prepare the crossing of the river Maas. But It was also designed to meet the direct operational objective to save the Germans the time required for the deployment of the artillery, thereby enabling them to surprisingly begin the engagement several days earlier than the French would have thought to be possible.[25] Consequently, it was possible that operational fire was related to operational movements, as in Sedan, but it could also be aimed against the fundamentals of operation by destroying infrastructure and the logistic system, as described earlier. Air assets are particularly appropriate delivery means for this kind of fire.

In order to prepare for the landing operation in Normandy, the Allies began in March 1944 to concentrate the bombardment on operationally important targets. This becomes evident when considering the target priorities of the allied bomber formations.

January:	Aircraft engine and auxiliary equipment factories, traffic targets, V1 installations, airfields
February	Airfields, traffic targets, V1 installations
March	Traffic targets, aircraft and engine factories, V1 installations, coastal fortifications and airfields,

April	V1 installations, traffic targets, airfields, coastal fortifications, naval *surface* targets.
May	Systematically increasing attacks against traffic targets including now moving traffic and road bridges, radio installations in the coastal area, V1 installations, coastal fortifications.

It becomes evident how traffic targets and airfields of particular operational significance - and accordingly, of course, the intensity of the air strikes against them - become more and more important, Six days after the landing operation, the German command notes-. *"The continuous heavy air strikes against road junctions, built-up areas, bridges, railway stations makes it almost impossible to rapidly bring tip reinforcements, ammunition, POL ( ) in the long run, the numerical superiority of enemy air forces paralyses any movement and any operation and, consequently, any possibility to command and control.*[26]

The Allies managed to largely interdict the railway traffic into the operational theatre. Instead of the 200-250 supply trains per day that would have been necessary, the rate dropped to a more 20-50. Force movements were also severely affected. The fire proved to be particularly effective against the more unprotected logistic system. Thus, the Armor Instruction Regiment lost only 5 of 180 tanks during the approach, but one tank detachment alone lost 20 out of 35 POL and ammunition trucks.[27] While the air strikes alone did not bring about a decision, they permanently destroyed the Germans' operational capabilities. The possibility offered by operational fire extended the options of military action and, in addition., the dimension of space.

The allied offensive in Korea in September 1950 used in a similar form the effect of air assets against the North Korean logistic support on the ground while the U.S. fleet interrupted the logistic support at sea. With the landing operation at Inchon, army units increased the threat to the line of support which went past Seoul. A swift reaction to the landing operation in the form of a counteroffensive was prevented by the Allies' air supremacy. Commander in Chief MacArthur considered the disruption of the logistic basis of the North Korean operation to be the key element of the allied counteroffensive, *"four out of five times a force (was) defeated after its lines of supply were severed.*[28] At the same time, the landing at Inchon was a classical maneuver against the enemy lines of withdrawal. Thus, the operational fire of the air forces against the North Korean logistic system was assigned the additional function of supporting this landing operation. It becomes apparent here how difficult it is in the individual case to attribute an exactly defined role to the various assets, since their affect results not least from their synergy. Often several purposes can be pursued at the same time and in other combinations at that involving other means such as maneuvers and deception.

Modern precision-guided weapons provide for an entirely different type of fire of operational consequence. They even allow for the engagement of command and control systems, command posts and other weapon systems. As early as in World War II, efforts were taken to conduct such pinpoint attacks.[29] It was already possible to destroy dams, individual industrial plants or important bridges.[30] But on the whole, the standard of ordnance technology was insufficient for these purposes. This did not change until the introduction of guided missiles. In addition to their tactical significance mentioned above, the threat to the British fleet by Argentinean air-launched Exocat missiles also had

an operational dimension. The operational threat primarily concerned the two aircraft carriers, as the commander-in-chief, Admiral Woodward, noted: "*Lose 'Invincible' and the operation is severely jeopardized. Lose 'Hermes' and the operation is over.*[31] In order to minimize the threat to their fleet, the British deployed them as far as possible in the South Atlantic, on the margin of their ability to support the landing operation on the Falkland Islands by means of air attacks and with limited possibilities to threaten the Argentinean communications with the mainland. In this context, it should be noted that the Argentineans had only a total of five Exonet which could be launched from an aircraft.[32]

In the Second Gulf War, the Americans used precision-guided weapons such as the 'Tomahawk' cruise missile or laser-guided bombs against ground targets, too. Since they can be dispersed or camouflaged, it is much more difficult to detect such operationally significant targets as it is possible at sea. This kind of fire presumably was considerably less effective than assumed immediately after the war.[33]

On the whole, fire in the operational sense is a problematic study object, since a coordination of maneuvers and fire, even if considered in large dimensions is a tactical mission. This is made evident by fundamentally different determinants. Indeed it becomes apparent here that technical progress has increased substantially the number of options of striking the enemy with fire. The consequence of this new operational potency is a spatial extension of the threat which requires the continuous readiness of the forms even far away from the combat zone to enter a surface-to-air engagement. The access to these assets was not allocated to the tactical command levels alone. Other levels which before only performed operational functions have also reserved the right to employ

specific types of weapons. However, with the direct employment of fire operational commands no longer confine themselves to their classical function of initialing and combining engagements, but to some extent they conduct them themselves.

CHAPTER THREE

OPERATIONAL ART AND THE DIMENSION OF TIME

Now the new concepts for maneuver warfare, which were developed on the basis of the experience gained in World War 1, initially were designed to produce a physical effect on the adversary which reduced his ability to react. This was then the prerequisite for the actual physical effect which went as far as to the adversary's destruction.[34] This means that the operational command echelon had to deal with the struggle for command and control capability. In addition to an entire range of measures designed to weaken the adversary's command and control capability, swift action was primarily considered to be an appropriate means. With respect to land warfare, this means that the prime operational requirement for maneuvers had to be speed. Since speed is the relation between distance and time, the objective of these operational concepts is the concentration of the engagements in terms of time and space. If this concentration is achieved, the operational initiative is secured.[35]

The expectation that command echelons at the operational level lose their ability to respond appropriately if they are faced with surprising speed was derived from tactical experience.[36] But in the light of the aforementioned race for information at the operational level, the expectation would prove to be correct. In fact, the speed of a maneuver may have a paralyzing effect, since the need for information required to reach the necessary decisions, which increases in the emerging crisis, cannot be met. There are two reasons for this inability:

(1) The communication of information does not meet the increased need for information caused by the pressure of time,

(2) what is more important is the fact that due to the accelerating changes in the situation it is no longer possible to screen and evaluate the information, so that relevant information no longer can be selected and made available to the command echelon.[37]

In many cases it was possible to paralyze the command echelon at the beginning of an operation: The German command proved to be paralyzed with regard to countermeasures during the first few hours of the invasion, just as the Americans were at the beginning of the Tet offensive in 1968 or the Israelis at the beginning of the Yom Kippur War.[38] Yet there are particular requirements to be met to maintain the paralyzation of the adversary for an extended time after the initial effect, since in all three cases the respective commands were able to free themselves from their situation. As a prerequisite, the enemy's operational intent and its dimension in terms of time has to be assessed correctly so that the command working process can be confined to the consideration of relevant information and effective action can be ordered. Therefore, if the success paralysation of the adversary is primarily challenged by the question as to whether he himself will succeed in realizing in time the enemy's intention, operational planning can get into a dilemma. If it pursues with full force and at full speed the thrust toward the point where the decision is sought, it reveals itself putting the stakes solely on bringing about a decision fast enough to deny the adversary any opportunity to react offensively. This is where Montgomery failed in his operation "Market Garden," when he underestimated the German defense forces' ability to react.[39] As an alternative. the intention is disguised by means of deception as well as by operational secondary thrusts, which reduces, however, its enforceability in the main thrust. The Soviets committed this

mistake when they tried in the winter of 1942-1943 to isolate the Southern wing of the Eastern front, which offered the Germans the opportunity to defeat elements of the Soviet attack groups. Therefore, it is evident that highly mobile operations are usually designed to be of short duration n order to ensure that the benefits associated with the high speed can also be realized.

When considering the phenomenon of paralysation by superior speed, it nevertheless must be kept in mind that this effect is not a substitute for success in combat but only provides for better operational exploitation. Accordingly, the paralysation caused by the German Battle of the Bulge offensive in this case primarily affected higher U.S, levels of command; the tactical command echelon was hardly affected and fought so successfully that it was evident already after the first few days that the offensive had failed.[40]

It has already become evident that operational speed is a relation between the paces of the adversary forces and the friendly forces rather than an absolute quantity. The Germans primarily owed the success of the large-scale battles of encirclement conducted within the scope of "Operation Barbarossa" to the superior speed of their operational tank units, which enabled them to pass and encircle the mostly non-merchanized Soviet forces.[41] This advantage can also be achieved by way of amphibious maneuvers. With the landing operation at Inchon, the Americans conducted an amphibious encirclement at a rate which exceeded that of any ground-based maneuver.[42]

Subject to the conditions of the mechanization of warfare, operational art has to deal with the fact that the various operational elements to some extent are capable of maneuvers which differ considerably in terms of speed. There is a considerable

advantage that can be drawn from this differing operational mobility, which is hardly surprising. Due to its particularly swift availability, air power is a suitable means to direct a concentrated effect of fire into a closely confined area without permitting army units to withdraw from that fire even by fastest maneuvers. When after the breakout from the Normandy bridgehead a German counteroffensive at Mortain was to break through the narrow corridor of attack, the operational crisis was managed by means of employing air force assets which crushed the attack.

The combination of mechanized ground maneuvers with the speed of air power can be considered to be a characteristic of operations which are designed to provide for a concentration of combat actions in terms of time and space.

The operations in the Southern region of the Eastern front in the winter of 1942-43 illustrate well how the aforementioned phenomena and relations, which so far are considered only separately, have a common and interacting effect on operational command and control.[43] After the successful encirclement of Stalingrad, the Soviets were about to cut off Army Group A, which was still deployed in the Caucasus, by means of a thrust towards Rostov. The attacker's prime advantage in terms of speed was the fact that the distance from the Soviet starting positions to the Black Sea was considerably shorter than the withdrawal route of Army Group A. Another result of this offensive operation was the fact that it provided offensive coverage for the operation in the Stalingrad area by preventing the Germans from calmly making available sufficient forces for relief operations. At least the Germans managed to keep the withdrawal route open long enough. However, in order to do so, the relief offensive against Stalingrad had to be aborted.

The command of Army Group "Don" – later designated as Southern Army Group – which was engaged in defensive operations, realized that the top priority was to gain time in order to regain the ability to act at an operational level. In the meantime, the Soviets had launched a new offensive which consisted of two thrusts to the Southwest: one of them from the Belgorod area and the other from the Isjum area. Since this operation was designed to be conducted excentrically, the offensive wedges were hardly able to support each other but may have been designed to promote the dissipation of the German defense effort. Yet it was easy for the Germans to assess the objective of these attacks. And given the long distances that had to be covered, the effect of speed was lost, since the Germans had enough time to prepare their counteroperation. Drawing the consequence from the weaknesses of the Soviet plan, the Commander-in-Chief of the Southern Army Group took the option to be in turn faster now than his adversaries: He concentrated the bulk of his mobile forces and conducted a counteroffensive, which the Soviets had not expected, into the flanks of the Southern offensive wedge instead of trying to position all his forces ahead in the course of frontal defensive operations. He reckoned that the offensive against the lines of operation would become effective timely enough to ensure that the Soviets were unable to pursue their original intention until the accomplishment of their objective. This assessment proved to be correct. Manstein later commented the weakness of the Soviet operation with the words: *'Indeed one will rather have to say that the Soviet Command did not manage --except at Stalingrad - to be strong and at the same time fast enough at the relevant decisive point.*[44]

CHAPTER FOUR

OPERATIONAL ART AND THE DIMENSION OF SPACE

Since it is a classical core function of operational art to move forces in an area, the familiarity with space as a dimension of operational command and control was self-evident. But World War I had yielded little experience that showed space as a challenge also at the operational level. In the French theater, there seemed to have been at best a lack of operationally useable space. Thus, the most important lesson the French drew from the war was that the selection and preparation of the area was the most important operational task in order to thus optimize the conditions for tactical command and control.[45] The Maginot line was the result of that view which culminated in the phrase coined by the French Commander-in-Chief, General Gamelin: "*Whoever attacks will lose.*" In fact, the apparent ineffectiveness of the Maginot line must not obscure the fact that the task of preparing the selected area for the engagement is important. Both at El Alamein in 1942 and at Kursk in 1943, the defense forces prepared the area, which enabled them to counter successfully the German strive for a fast maneuver. In particular at Kursk, the Soviet operational reserves would have arrived too late if the extensive defense facilities had not delayed the German attack for several days.[46] Thus, the appreciation of a prepared battlefield prevailed, be it with regard to the Israeli defense positions on the Suez Canal, the Argentinean positions on the Falkland Islands or the Iraqi field fortifications in Kuwait. This approach served two purposes. On the one hand, the prospects of retaining an area thus can be improved. But this is primarily a tactical perspective. On the other hand, a battlefield is chosen this way in an operational

approach, which results in creating the best preconditions to deny the adversary the option of fast operations.

As already shown earlier, mechanization offered a way to avoid the attempts of such confinement to an area, as it permitted most rapid concentration and maneuvers of forces. Given the freedom of the attacker to choose the location for the attack, even the strongest positions could hardly prevent a breakthrough. Consequently, the defense forces, too, had to have fast units in order to move them then to the location where the decision was sought. But mechanized warfare, which initially seemed to mean the liberation from area-related constraints, entailed two operational problems which could limit, and to some extent challenge, the effectiveness of warfare aimed at the concentration of combat action in terms of time and space. These were:

(1) the problem of logistic support of a mechanized operation, and

(2) the problem of controlling an area.

Apart from the limits which logistic support imposes on modern maneuver warfare, operational art is faced with a different challenge whose management as a matter of fact is diametrically opposed to the original concept of mechanized operations after 1918. This challenge is the military control of an area. The mechanized operation is aimed against the adversary's military power, against which the own military power can be brought to bear effectively as concentrated as possible in terms of time and space. This search for the decisive battle is still governed entirely by the thinking of the role models Napoleon and Moltke. However, it became evident that adversaries either did not accept or evaded from the outset this operational decision by avoiding the concentration

in term of space and time. Yet this results in a changed operational task: Now military power is supposed to be effective as extensively and permanently as possible.

Apparently an operational concept which is designed to deny the use of the area first of all threatens the vulnerable logistic support of a mechanized army. But it becomes evident in most cases that this will have little effect. Neither the partisans of World War II nor the Vietnamese or Afghan guerrillas were able to cause serious problems to their adversaries' logistic support, whether it was the Germans, the French, the Americans or the Soviets.[47] Indeed the point simply was that the very inability to enforce a decision already was a success for the side that would be defeated in case of such a decision. Thus, the decision is governed primarily by the attrition of the strategic resources.

In this context, size and above all the nature of the area proved to be essential conditions for an operational command. The concepts of arming the people and of partisan warfare of the 19th century were reimplemented. Yet originally their prime purpose had been the mobilization of large numbers of warriors. What was at issue now was the capability of area-covering action as far as possible. A military organization which does not have to perform large-scale, complete maneuvers, which depends to a minor extent on logistic support and has a rather unspecific command and control system is enough to deny an area. That way it is almost exactly the opposite of a mechanized force, to which it also offers only few targets. The procedure of denying an area consists of attacking weaker adversary units and inflicting as much damage as possible while withdrawing stronger unit. In doing so, the tactical advantages of the ambush are used, whereas any extended confrontation is avoided where the mechanized adversary might be

able to take advantage of his ability to concentrate the effect of his weapons. What is decisive in this context is the capability of withdrawing and dispersing faster as a target than the mechanized adversary needs to concentrate his forces for the counterstrike. Here the extent of aggressive action depends entirely on the partisans' strength.

Basically, operations designed to deny an area are defensive by nature. They may be conducted either parallel to a maneuver war, as it was done in Russia, or may be the only type of operation, as it was the case in Vietnam. Of course, this has an influence on the way one wishes to achieve the control of the area. The Germans were satisfied in particular in the Balkans, and to some extent in Russia, with a form of control which can be characterized as sufficient: They made sure that strategically and operationally significant sectors were in their hands. This was the standard governing their allocation of forces. In order to compensate for their weak forces, they applied most readily terror measures which were designed to make evident their capability of using force. In doing so, they aimed directly at the people's will in the area to be controlled. Compared with the minor influence partisans had on the course of the key mechanized operations, the German approach was quite effective.[48]

On the other hand, the Americans in Vietnam faced the task of getting the area completely under control. In this context, the specific character of the Vietnamese area further complicated things. The U.S. attempt to get the area under control by means of maximum airborne mobility and concentrated fire was just enough to maintain the status quo. Despite tremendous technical superiority, they failed to identify targets among the Vietcong which would have been lucrative enough to destroy to bring about a decision destruction. The bombardment even of civilian targets in North Vietnam as a form of

using terror failed to yield a result. It was not until North Vietnam proceeded to mechanized warfare in the Tet Offensive that the superior US. military potential became effective.[49]

The operational command and control of a mechanized army which is faced with the task of getting an area under military control gets into a dilemma. Its concept which is directed against the adversary's military power will be challenged if it becomes unclear what the adversary's military power actually is. On the other hand, there is no operational alternative except the approach of forcing the adversary nevertheless to face the superior capability of concentration. In the attempt to gain control over an area, operational command and control is faced again with distinct limits.

In almost all confrontations of that kind, a radicalization of warfare can be observed. Since World War I, when it became more and more difficult to separate the military and war from the civilian sector, there have been tendencies toward a more unscrupulous warfare.[50] In Germany, which had become largely impotent in military terms, considerations were developed after 1919 to involve the entire society into warfare. Yet this was done from an operational perspective which was intended to mobilize the entire *national community (Volksgemeinschaft)* as warriors and to involve the adversary into an unlimited war without any consideration even of the own population, economy and infrastructure.[51] Combined with the thesises on total war, the ground was thus prepared for the radicalization of German warfare, in particular in the struggle against the Soviet Union.[52] Within the scope of its concept of revolutionary war and class struggle, the Soviet Union, too, had developed views on the extension and radicalization of warfare, which were implemented immediately from 1941.[53] Faced with

the size of the area and the own incapacity of establishing an effective control, a dynamic process developed which resulted in the application of military force in order to eventually reach the goal by means of terror. This is clearly made evident by the way the Germans proceeded to got the occupied Eastern territories under control. The use of terror as a means of warfare and in particular of operational art leads us back to the view that first of all the adversary's will and, accordingly, the fighting spirit of his society need to be engaged. Based on the same rationale, the Allies radicalized their warfare with their bombing war waged against the German Reich.[54] As a result of the extension and radicalization of warfare, terror in this case becomes a means to increase the effectiveness of the mechanized operation.

As a result of the mechanization of warfare, operational art strives for concentration in terms of time and space in order to enforce the decision. The speed of an operation in one case turns into an advantage in comparison with the slower adversary but also into a challenge facing the own command which controls the operation. For despite the available technology, the assessment of the operational situation remains a problem which entails the difficulty of realizing an operational decision and its scope. Moreover, the dimension of the area limits the effectiveness of mechanized operations in two respects. The necessity to support a mechanized army and the scope of the requisite logistic support system limits its capability of performing rapid maneuvers. Therefore, it is possible under adequate circumstances that an adversary evades the operational decision by a maneuver deep into the area. The other limit of mechanized operations is the inability to decide the confrontation about control of an area. No matter which operational concept is considered, be it the concept of concentration to reach a decision

or the concept of withdrawal and evasion delaying a decision - none of them can guarantee a decision by itself.

CHAPTER FIVE

OPERATIONAL DECISION AND DECISION OF WAR

The Absence Of A Decisive Battle

The fact that it is impossible to unilaterally force an operational decision leads up to the question as to the relationship between the operational decision and the decision of the war. In World War I, the decision of the war was not a result of the conduct of operations. Indeed the outcome of the war was determined by the attrition of the strategic resources.[55] This was true both for the result of the entire war and for individual theatres. Even such impressive operational successes as the battle of Tannenberg in 1914 failed to bring the decision of the war on the Eastern front any closer. One exception to the rule was the conquest of Romania in 1917, since in this case the side of the Central Powers was strategically superior to such an extent that the operation could be concluded with a decisive result. However, this only means that while the quick success was due to the conduct of the operation the root of the success was the availability of the requisite strategic resources.[56]

The question as to which extent operational art has a decisive influence on the outcome of the war was so important because it sparked a confrontation between the military and the political sector about the competence of exercising command and control in a war.[57] While basically this problem of defining competence is not a problem of the modern era, it has assumed a changed and increased quality due to the development of the modem, differentiated government organizations.

The fact that operational art largely failed to yield results in World War I – apart from its contribution to strategic attrition – puts the role and significance of the military

in a modern nation on the test bed. For what is much more important than a solution to the problems of mechanizing of armies and facilitating of operational decisions is the question of whether operational art really results in politico-strategic constraints and to which extent the military leadership should have an influence on warfare.

Operational Art And Strategic Resources

If the activity in war is defined as the mutual infliction of damage – predominantly by means of physical violence,[58] it was a consequence of industrialized war that the damage no longer was caused primarily by killing soldiers but beyond that included everything a modern society produces and which it needs for its subsistence. Accordingly, the strategic resources assumed a different nature. Money ceased to be the decisive resource to raise and maintain armies. Economic power, the capability of food supply, access to advanced technology, sufficient potential for the recruitment of servicemen ad for ensuring the production processes now became strategic resources.[59] By contrast, the available military resources which can be directly employed in a war can be designated as operational resources. It was the superiority in terms of strategic resources which resulted in the Allies' victory over Germany.

Such strategic resources had originally not been a parameter in the realm of operational art. Thus, before World War I the German General Staff had not taken the problems of a mobilization of these sources of power into account. But after that war it was no longer possible to ignore their significance. From an operational perspective, strategic resources are important to compensate for the attrition of the military instrument. Therefore, operational art tends to make use of strategic resources in order to establish optimum prerequisites for the conduct of operations.[60] At the same time, of

course, the adversary's strategic resources move into the operational level's center of attention. The way in which under various circumstances the aspect of strategic resources - including the relation with the adversary - was integrated into the operational considerations is an important aspect within the scope of a study on the definition of operational art and strategy.

The German Empire had strongly experienced the inferiority of its strategic resources in its struggle against the Entente. Thus, it must be surprising that this fact influenced the post-war operational considerations and planning only to a minor extent.

Within the scope of the offensive against the Soviet Union, the operational concept of the German military leaders failed. Even the impressive operational successes of the year 1941 were not big enough to prevent the Soviets from re-establishing their superiority in terms of operational forces by means of regenerating themselves from their strategic resources. The (Germans') attempt to get control of the Soviet resources failed due to the insufficiency of the operational resources. Moreover, contrary to the German concepts it was impossible to directly use these resources for the strengthening of the own operational forces. Not least, the exploitation concept which was based primarily on terror operations proved to be unsuitable for the mobilization of economic potential in the occupied regions.[61]

Given limited strategic resources, the Germans had attempted to optimize their operational concept with a view to achieving a decisive success within a short period of time. They indeed succeeded in conducting short, successful operations in Poland, France, the Balkans and in Russia.

Taking the German Empire and its operational doctrine of quick offensive operations as an example, it becomes evident that a purely operational perspective on the problems of strategic resources is very shortsighted. In addition, what becomes apparent is the difficulty to abandon internalized operational concepts in order to react to changed strategic situations.

The United Kingdom essentially waged World War II within the scope of a coalition, which suited its strategic situation. After all, it was allied with the United States and the Soviet Union, the countries with the most extensive strategic resources in the world. While this enabled the United Kingdom to be economical with its resources, a significant contribution to the warfare effort nevertheless was indispensable, if the country wished to take part in the decision-making processes regarding the political future at the end of the war.[62]

Based on this foundation, the British conduct of operations developed in World War II. In this context, its basic characteristics were largely defined by Prime Minister Winston Churchill. Churchill wanted to use the British maritime supremacy for operations on the exterior line. These operations were designed to bring about operational decisions with respect to forces at weak spots of the German territory. The operations themselves were conducted in accordance with the principles of mechanized warfare, i.e., they were designed just like the German adversaries' operations to gain the operational initiative as a prerequisite for success. In parallel to that, the so-called strategic air war was conducted, which originally was to be directed against the German industrial capacities but then aimed at the residential districts of the population working there in order to break the population's fighting morale. Indeed we can say that basically

the strategic overall concept was abandoned when the air war switched from the destruction of the strategic resources toward bombing terror.

Thus, to sum up we can conclude that the British in World War II conducted a moat thorough evaluation of their strategic goals, their resources and the resulting operational options. They decided on an adequate - and ultimately successful - conduct of operations. However, with a predominance of strategic control, this approach does not display a strict separation of command levels.

In Vietnam, the United States employed a high-technology form. The operational thinking of the U.S. Armed Forces was based on the United States' specific military experience. From the American Civil War they had already learned the lesson that the strategic resources should have an influence on operational command and control, since even at the operational level war was considered primarily to be an attrition of forces. The operational success is above all achieved by the application of the superior resources. Therefore, if operations were decided by the superiority of operational resources, it was an inevitable conclusion that the strategic resources, which nourished those at the operational level, became an important goal. World War II confirmed this view and even reinforced the tendency that an operational decision is forced in particular by material-technological superiority. The operational task now was to bring the superior resources of the United States to bear. And this proved to be unexpectedly difficult, since the partisans were not an appropriate goal. The operational command was unable to bring about a decision as long as the partisans simply evaded it. The inability of the U.S. Armed Forces to force an operational decision is made evident by the more fact that 88 percent of all engagements were initiated by the Vietcong.[63] In this context, the support

provided to the partisans by North Vietnam proved to be the principal problem: Thus, they were able to rely on strategic resources which were beyond the weapon effect of the U.S. military.

It was not until the air offensive "Rolling Thunder", in 1965 that large-scale bombardments were also conducted against targets in North Vietnam. On the one hand, the bombardment was aimed at the logistic support of the Vietcong provided by North Vietnam; on the other hand, it was attempted to hit the North Vietnamese resources by way of attacking industrial targets. Yet it became evident that neither the one nor the other target could be engaged effectively. The logistic support continued to flow undiminishedly, and the industrial structure in North Vietnam was scarcely developed and was allocated only minor priority by the (North Vietnamese) leadership. The damage in North Vietnam did not even reach the extent of the support provided by China and the Soviet Union. In the years from 1965 to 1967, the value of the damage caused by bombing attacks amounted to $ 370 million, whereas the support comprised services and goods with a value of $ 600 million in the civilian sector and $ 1 billion in the military sector.[64] According to strategic considerations, it was impossible to cut off this support.

Thus, from an operational perspective the confinement of the conflict by the political leadership became the main obstacle to success. Out of consideration for China and the Soviet Union, the U.S. Administration was reluctant to employ its entire military personnel in accordance with the operational requirements. Thus, the conduct of the operation was constrained by strategic considerations. Since an operational decision against the Vietcong could not be forced, they could only be hit via the strategic resources of the North Vietnamese. Yet these resources were inaccessible to the U. S.

military leaders. In the ultimate analysis, this meant that the own superiority could not be brought to bear, either.

The U.S. political leadership did not sufficiently consider the requirements of the operational level. Operational art, which, after all, is to contribute to a strategically significant decision, cannot ignore the influences which result from the use both parties make of their strategic resources. It is made particularly clear by the political constraints in the Vietnam War that it is an instrument for translating strategic capabilities into military action. If this capability is curtailed from the outset, the instrument becomes ineffective, too. This dilemma could only have been solved if the U.S. Administration had first reviewed its strategic objective and then developed together with the military an appropriate operational approach.

The Second Gulf War also was a constrained scenario. It was neither conceivable that the U.S. strategic resources would be fully committed to the war, nor was it possible to totally destroy those of the Iraqis. The strategic goal in this case was the recapture of Kuwait and the reduction of the Iraqis' military potential.[65] It was a clear lesson learned from the Vietnam War - that such a goal could only be reached if the Iraqi's strategic resources were also attacked. In order to keep the collateral damage low and to achieve as fast as possible an effect on the operational resources, too, infrastructure goals were selected, in particular the Euphrates and Tigris bridges, the energy supply system and the communications network[66] These attacks were so successful, that in the light of the consequences of the engagement of its strategic resources alone Iraq was willing to withdraw from Kuwait.[67] This air offensive itself, of course, was an operational task, but its goal was determined by strategic criteria, and it was designed to establish the

conditions for a successful completion of the overall operation. The fact that the air offensive alone would have ensured that the strategic sub-goal, i.e. of the withdrawal of the Iraqi forces, was attained indicates that there is no clear--cut separation of strategic and operational goals, and that one measure can be taken to simultaneously pursue goals at both levels.

Against this background, it was then possible to conduct a classical mechanized operation which did not only result in the liberation of Kuwait but also in a reduction of Iraq's military resources. Here the instrument of the conduct of operations had been assigned an accomplishable task. In addition, the prerequisites for the success of operational art had been identified and strategically ensured.

Operational art and its concepts are closely linked with the strategic resources. This is due to the fact that the regeneration of the operational forces depends on them. Therefore, the quality and the character of the strategic resources on both sides dominate in the long run the course of the operations. The attempt to elude this dominance by means of superior operational art is bound to fail, since operational decisions do not reach a scale which makes the regeneration of the operational forces impossible. As a result, operational art also extends to action against strategic resources. As an instrument, it raises requirements with regard to the use - or, with respect to the adversary, the denial of use - of the strategic resources. Thus, the boundaries between strategic and operational resources blur. Therefore, operational art and strategic level command and control must engage in a dialogue, the nature of which will be examined further below.

Denial Of Decisive Battles

Up to now, the prime issue of consideration was the question of how an operational decision is reached and what the determining factors are (under which framework conditions this is done). Yet what if quite on the contrary it is intended to exactly prevent such a decision? Before the problem of denial of decisive battles is addressed, the character of the operational decision and its contribution to the outcome of the war must be considered. The classical conduct of operations was aimed at reaching a decisive battle. The belief in the effectiveness of this operational action resulted from experience gained from Napoleon's and Moltke's campaigns.

The industrialized war could no longer be won by means of a single operational decision. A series of operations was necessary to decide a war. This means that striving for a single decisive battle no longer makes sense in operational terms. But even in case of a series of operations, the objective of defeating the adversary's operationally significant forces continued to prevail. However, the goal no longer was to directly reach a decision of the war but to prepare a new operation. Here the operational thinking moves in tactical categories: regardless whether it is sought from the defensive or immediately in the offensive, the operational decision is forced by way of attack and destroys the adversary.

The example of the Second Gulf War could raise doubts with regard to the claim that one single decisive battle is not enough in an industrialized war. But it is necessary to abandon the concept that decisive battles are classical land or naval battles. The Gulf War is subdivided at least into two operations, the first of which, the air offensive, ended with a decision before the second one, the land offensive, could begin and bring about the

next decision. Only the two operations combined resulted in the achievement of the strategic goal.[68]

A belligerent party is not always interested in an operational decision. The reason for that can be the assessment that such a decision cannot be expected to be successful. In World War I, this applied to the conduct of operations of the German General Von Lettow-Vorbeck. Being considerably inferior in terms of personnel strength and resources, he evaded again and again a decision, thereby keeping the situation in the colony of German East Africa undecided until the Empire was definitely defeated in Europe. Lettow-Vorbeck's approach can be described as a completely defensive conduct of operations which avoids any decision of operational significance but may comprise offensive elements at the tactical level. It did not influence the decision of the war, but is managed with 3,500 German and 12,000 indigenous troops contain down allied forces with a strength of 130,000 men and to kill 48,328.[69]

When analyzing the relationship between operational movements and the dimension of space, two options were identified which are suitable for evading an operation designed to force a decision. One of them was to evade the search for a decision by maneuvering into the area. Examples of such operational withdrawals are the Soviets' evasion after Stalingrad or the Germans' withdrawal from of the Rshev are in 1942-1943.[70] However, in this case the operational defensive was only the preparation providing the strength required for subsequently forcing a decision. Thus, this operation was not intended to have a direct effect on the outcome of the war. Such an effect can certainly not be achieved alone by abandoning an area, since sooner or later it results in the loss of the strategic resources. Therefore, operational withdrawal is only suitable for

evading an operational decision for a given period of time. Thus, from a superordinate view it is the defensive phase of an operation before changing to the offensive quest for the decision.

However, in wars in which one side confines itself completely to partisan warfare, the denial of a decisive battle is the only operational concept. In Vietnam, the Vietcong avoided any operational decision until 1968. As soon as the Americans attempted to bring their forces to bear in a concentrated effort, the Vietcong withdrew. On the other hand, they were strong enough for successful operations against covering forces, thus preventing the South Vietnamese Army and the Americans from controlling the area. An expansion of the war and an intensification of combat action failed to yield any advantages for the Americans. It only resulted in major collateral damage, which turned the destructive affect of warfare against the population that actually should have been protected. As a result, a form of balance developed in the theatre within the scope which neither side was able to directly force a successful outcome of the war, neither the communist expansion nor the attempt to stabilize South Vietnam were successful. However, in operational terms the Vietnamese were successful in their intention to avoid a decision, whereas the American attempts to enforce it failed.[71]

The prime significance of avoiding an operational decision resided in the fact that the Vietcong and the North Vietnamese thus preserved for themselves the option of a victory, whereas the Americans' prospects kept dwindling in the light of their repeated failure. Given the insight that they would not be able to essentially change the military status quo, the Americans came to accept this as the decision of the war.

The partisans' operational defensive had caused a war of attrition. Yet it was not the direct effect of this attrition which had brought about the success but the growing doubt of the Americans as to the outcome of the war. The relation between the losses and the assessment as to what could be gained in turn urgently called for the termination of the war. The question arises whether the Americans could have won the war with a different conduct of operations. But there is little evidence for that assumption, since even if the whole of North Vietnam had been drawn into a total air war, its capability of avoiding a decision would not have been affected.[72]

The rarity of such a conduct of operations characterized by the denial of a decision indicates that this is by no means an approach which is superior to all other operational concepts. First of all, it is only useful within a very confined operational framework which is designed exclusively to preserve the situation. Therefore, in most cases such a conduct of operations is found as a phase of a strategic concept which precedes the quest for the decision.[73] Following the Chinese example, the North Vietnamese then also conducted decision-oriented operations for the enforcement of their final strategic intentions vis-a-vis South Vietnam. In fact the operational concept of denying a decisive battle decided the outcome of the war between the Vietcong, North Vietnam and the USA in the Vietnam War by forcing the latter to abandon its intervention. The prerequisite was that North Vietnam and the Vietcong only wanted to maintain from a strategic defensive position the status quo which had existed before the U.S, intervention. This shows that operational art in itself does not comprise the means to force a decision under all conditions.

CHAPTER SIX

CONTINUITY AND CHANGE OF OPERATIONAL ART

Operational art is a level of military command and control which resulted from the hierarchical structuring of decisions and the command and control of military resources. In the 19th century its classical function of bringing about and interlining engagements proved to be necessary in order to master the challenges which resulted from the increased complexity of society, economy and technology in the military sector and in warfare.

When considering the complex phenomenon of operational art, we must not lose touch with the fact that the definition of its supreme military command level reflects the military's role concept for war. Nevertheless, operational art is not a command level sui generis. While tactical and strategic functional fields can be clearly separated in terms of concept and notion, this does not apply to the conduct of operations. The conduct of operations is subject to a continuous conflict with tactical and strategic command levels when it comes to the definition of its function. While it depends on the one hand on the conditions tactics offer, it is dominated on the other hand by the strategic circumstances. At the level of operational command and control it is attempted to cope with these two parameters. It is important to perceive the element of continuous change in both determining factors. Both the reality of a future war and the strategic circumstances, conditions and goals are subject to continuous change. Thus, operational art is faced with external questions as to whether operations are to be oriented toward fast speed and a quick decision or toward long duration and a delay of the decision, whether comprehensive physical destruction or a psychological effect is sought. This makes clear

that there can be no systems of rules, no doctrine for operational art. Indeed it must be a requirement for operational art to be able to flexibly and appropriately adjust to the various circumstances. As a matter of fact, a look back to the past shows how often operational concepts, which had been developed for very specific strategic scenarios, resulted in failure when implemented under changed circumstances.

The required flexibility of operational art is opposed by an immanent inertia of operational concepts. For operational art expresses itself to a great extent in the development and practicing of command and control procedures and decision-making criteria. However, the necessary long-term testing and practicing of command and control procedures profoundly shapes the military. It cannot be denied that this approach is appropriate to the problems to be solved, as these problems are primarily characterized by uncertainty, complexity and pressure of time.

Operational art materializes above all in the form of an application of previously developed operational concepts. However, the scope of maneuver of these concepts is confined to the limits of the strategic and tactical background which was perceived in the course of their development. But the optimization process within the armed forces involves the risk that originally problem-oriented views turn into absolute findings. Yet this entails a loss of realistic perception, which makes it more difficult to realize new conditions. The rigidity of operational concepts which thus develops involves the major risk that in case of surprisingly occurring strategic scenarios an army has only an inappropriate operational concept and is unable to quickly develop a now one.

Consequently, operational art is faced with a dilemma. It is a requirement for the efficiency of military action to develop capabilities in the field of operational art; yet

these operational concepts in turn limit the suitability of the military instrument in various strategic scenarios. Operational art therefore oscillates between a pressure for change, which requires flexibility and impartiality, and a striving for continuity which results from the striving for optimized planning and concepts. In the past, the nations in which an intensive dialogue between politico-strategic control and operational art took place were particularly successful in dealing with this dilemma.

However, all changes which affected the conditions for operational art have left untouched the indirectness of operational art as a constant characteristic. Operational art is situated at a certain distance to the engagement. This distance exits both in terms of space and time and is reflected by a delayed responsiveness. This is true, although by now operational command levels with particularly far- reaching and effective weapons also conduct engagements themselves. The indirectness of operational art with regard to the actual combat action provided for the opportunity to undermine the adversary's action by means of a high speed of the own operation. Thus, the operational ability to act was not primarily reduced by the physical destruction of the military potential, rather the decision was sought by means of paralyzing the adversary's leadership and by means of a psychological effect. However, the limitation of this concept also quickly became apparent, since the indirectness of operational art permits to control the own operation and its effect only up to a certain limit.

Due to its indirectness, the freedom of action allocated to operational art by the politico-strategic leadership cannot be made subject to a fixed set of rules but is solely determined by the strategic scenario and the goals pursued. In fact the request for operational freedom addressed to the strategic leadership - which is quite often the result

of the inertia somewhat inherent to operational concepts - frequently entails a change in the nature of the relevant war. On the other hand, the resources, goals and freedoms allocated to operational art must be harmonized with one another and correspond with the strategic intention. Therefore, in order to be complete, the interactivity between strategy and operational art must be reflected in the operational concept.

Operational art as a phenomenon became evident in conjunction with the industrialized war. It was forced in World War I to abandon its original intent to bring about the decision of the war and never again managed to implement it. The industrialized, modern war is characterized by a reduction of the significance of purely military factors. The dependence of warfare on the economic and technological potential of a society has further increased. Thus, the mutual attrition of resources forms the basis of the decision of the war. By means of destroying or attriting the military resources, operational art only makes a contribution to the decision of the war.

The Operational Concept's tendency towards concentration in terms of time and space was aimed at the destruction of the adversary's military potential and was countered by delaying and denying of the decision. While the concept of fast, intensive wars cannot be considered to be obsolete, it fits into the concept of a rather long-term conflict settlement which is designed to overwhelm the adversary's resources, as it can be seen, for instance, in the background of the Second Gulf War. The extension of the destruction up to the strategic resources sought at the operational level and with the integration of terror into various operational concepts fails to offer a solution, since such an approach must be directly related to the war objectives. Therefore, the politico-strategic leadership cannot delegate this part of warfare. Thus, operational leadership must confine itself to

development of potential approaches, the implementation of which is then decided in detail by the politico-strategic leadership.

This study attempted to show that the concept of operational art cannot be developed from the nature of war as is the case with strategy and tactics. The concept of operational art has undergone a considerable change in terms of meaning and interpretation; beyond that attribute may an analysis every single measure either to the tactical or strategic sphere. From the perspective of a clear concept developed from the nature of war, there are neither operational weapon systems nor can an individual action or measure be designated as being operational. Thus, in a more specific sense, the term "operational art" neither reforms to a military command level nor to specific military resources. Nevertheless, the term "operational art" is by no means superfluous. It reflects the phenomenon of the complexity of the modern military system. This includes the integration into society and into the political decision-making processes as well as the dependence on technological change. If operational art is understood as the indirect command and control of the engagement by the military, with the objectives and the guidance being provided by the politico-strategic leadership, this describes the requisite differentiation and division of functions of the command and control hierarchy in modern warfare. The term "operational art" denotes the translation of policy into military action. In structural terms this translation takes place at the interface of a nation's politico-strategic leadership and its military leadership. Thus, it can be helpful to identify and analyze leadership/command and control problems in the employment of armed forces and to develop therefrom requirements regarding the quality of coordination within the hierarchy of command and control. [74]

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