

LESSONS FROM THE PAST FOR NATO

by

RICHARD F. TIMMONS

In some respects it does not appear that NATO, nor the US Army, has taken full advantage of the *Wehrmacht's* experience in confronting large Soviet forces during World War II. That, in a nutshell, is the inference that may be drawn from the recent reflections at the US Army War College of several high-ranking German officers who served in the *Wehrmacht* and had the occasion to observe NATO's military forces, in some cases as officers of the *Bundeswehr*.¹

That the *Wehrmacht's* large-scale, post-Stalingrad operations offer potentially valuable insights for NATO's defense of Western Europe is virtually a truism. The Germans were defending against an overwhelmingly superior force. The dimension of the imbalance, and the effectiveness of the defense, can be grasped from consideration of the following: in January 1943 the *Wehrmacht* had, on the entire Eastern Front, approximately 500 operational tanks; the Soviets had five to eight times that number; yet the Germans were able to continue as an effective fighting force for more than another two years, even as they were fighting the war in the West and in Italy.

The key to the *Wehrmacht's* success was responsiveness—they were able to make good decisions and execute them rapidly. Several factors are responsible for the *Wehrmacht's* ability to do so, some of which are applicable to NATO today. But to understand the German war machine's superb defense of the Eastern Front, one must understand the context; it will be useful, then, to consider first some of the characteristics of the Red Army in the middle years of World War II.

The Germans considered the higher-level Russian field commanders to be soldiers of high quality and great ability. This caliber of leader and battle captain stopped at the corps level, however; those below often blundered badly at great cost to the Russian army. Marshal Zhukov personified the superb Russian professional; he is reported to have graduated from the *Kriegsakademie* in Berlin in 1935. On the whole, however, Russian leaders and soldiers alike lacked initiative and virtually always sought direction from their superior headquarters. Leadership in small units was especially inferior, as lower echelon leaders relied on "follow the book" solutions with a formality and rigidity of mind that made flexibility impossible and ruled out individuality. At the root probably lay an overwhelming fear of making a mistake and suffering the consequences.

Posted within each unit was a political commissar with authority nearly equal to that of the unit commander; he had the power to exact life-and-death punishments for those found wanting in some aspect of their performance.² This threatening aura must have had much to do with why few exhibited initiative and why the units were only capable of conducting one mission at a time and were unable to reverse directions once started; it may also have had something to do with the general attitude of fatalism that seemed to pervade captured Russian soldiers.

The 1943 Russian soldier was thought by the Germans to be temperamental and unstable in battle. He was easy to panic and stampede, especially when confronted by the unexpected, and frequently fled from the

battlefield. Mobile, fluid operations characterized by surprise often caused Russian units to break apart; the Russians would abandon both their equipment and their previous gains if panzer units found a flank and ruthlessly pressed the attack. The Russians generally seemed to overestimate the size of the German units when caught off guard, and they were herd-like in their efforts to disengage and break contact.³

When fully informed of the situation, and when no unexpected changes confronted him, the Russian could be a stubborn and fanatical fighter. In offensive operations the Russians were masters of infiltration, moving entire units and their equipment through German lines noiselessly to establish strongpoints 10 to 12 kilometers behind the lines. Such strokes were brilliantly executed. Defensive positions were prepared throughout the night, and by morning stocked and dug-in Russian troops would be able to thwart German efforts to eliminate them quickly, except at great sacrifice.⁴ The Russians practiced the art of camouflage meticulously and generally were excellent at fieldcraft and the use of terrain.

The Red Army attempted to establish bridgeheads at every opportunity and of every size. This was often done during darkness, which the Russians routinely used to maximum effect. The Germans learned that delay in attacking these bridgeheads or penetration strongpoints could be fatal. The Soviets reinforced such positions steadily and expanded them with tremendous speed and determination, making the lodgements progressively more difficult and costly to clear the longer they were allowed to remain. As a consequence, it became almost automatic for the Germans to attack these sites immediately upon discovery with whatever forces were at hand, even if that meant piecemealing forces.⁵

Tactical sectors for German units on the Eastern Front were large (a 50-kilometer front for a panzer division was not unusual), so combat methods had to be improvised. To the German advantage, the Russians at first were unable to defend or delay effectively, and defeating their units was not difficult. As

their experience increased they became more capable, although they were predictable in their use of artillery. German front-line units could anticipate barrages and avoid the consequences of heavy shelling. Even as the Russians improved, they did not practice the concept of coordinating artillery, aircraft, and mounted units to attack in unison. In one instance, the entire tank strength of the 5th Tank Army was destroyed bit by bit because of piecemeal commitment. Despite incredible casualties, however, the Russians were virtually always able to reconstitute decimated units; they regularly reappeared in the order of battle within several days' time. This ability constantly amazed the Germans.⁶

Given these strengths and weaknesses of the Red Army, the Germans learned that responsiveness was the key to conducting a successful defense. Such responsiveness comprises several factors—good intelligence, rapid decision-making, mobility, surprise, and independence.⁷ The *Wehrmacht* discovered that exploiting these characteristics was critical.

German corps were able to capitalize on these traits by keeping the headquarters small, mobile, well forward, and capable of reacting rapidly.⁸ The decision-making staffs normally numbered only three or four persons—the chief of staff or commander, G2, G3, and G4. They routinely had great trust and confidence in each other and talked frequently each day of the problems and contingencies facing them. The orders given were broad and without details, which were

Lieutenant Colonel Richard F. Timmons was a member of the US Army War College Class of 1984 when he wrote this article. At present he is the G3/DPT I Corps and Fort Lewis, Washington. Colonel Timmons is a graduate of the Virginia Military Institute and holds M.A. degrees from the University of Alabama and Central Michigan University. He has extensive troop experience and has served in Vietnam, Korea, and Egypt, where he commanded a Battalion Task Force in the Multinational Force and Observers peacekeeping force.



left to subordinate commanders to work out. Normally orders were given face-to-face or over the radio or telephone; they were rarely written in advance, though they always were completed after the fact for historical records and diaries.

This method of operation was possible because the corps commanders routinely spoke in person with their divisional commanders two or three times each day, and this degree of personal contact with subordinates was common for the army commanders as well. With this level of first-hand information, decisions could be made quickly by any commander as he and his staff were fully abreast of almost hourly developments.

Manstein, for example, made decisions very quickly. He told his staff what he intended to do and then asked if it was possible. He expected simple answers to be provided without great detail—then he decided. He left concern for details to others.⁹

Much of the time battlefield operations and techniques had to be improvised because of casualties, terrain, and unanticipated enemy formations or tactics and weapons. No set doctrine held for all situations. But to improvise successfully, the German leaders had to understand completely the current German doctrine and theory for war; then they could deviate from that with the expectation of success.¹⁰

One important lesson was that panzer divisions should never be used to attack fortified complexes; doing so failed to capitalize on their maneuver value and shock.¹¹ They were most effective in the counterstroke, where fixing forces held the enemy while maneuver units applied the full measure of their speed, shock, and mobility. This was especially effective if good intelligence was available. In these situations, radio intelligence was extremely valuable in revealing the strength of the enemy units in the opposing order of battle. In at least one major breakout operation, Manstein based his decision on where to punch through Red Army forces on intercepted enemy logistics transmissions that revealed Russian tank strengths unit by unit.¹²

The heart of German orders and operations was the concept of *Auftragstaktik*—

mission orders. This was more than a method of giving orders, actually more akin to a habit of thought, and it depended heavily on the quality of the training received by the troops. Usually the commander would provide only a single statement about the operation, consisting of the who, what, when, where, and why. That's all. He was no more specific than that; the job of working out the details was left wholly to the subordinate commander, without supervision.¹³

This method of operation was possible because of the trust that existed throughout the ranks, all the way down to the private soldier. It was simply taken for granted that everyone would exercise initiative to get the mission accomplished.¹⁴ As a result of this faith and trust in the unit's officers, troop morale was extremely high, even in the bitterest fighting. The troops felt superior to the Russians; they believed the Soviets could be beaten despite unfavorable conditions.

Sometimes the tactical situation dictated the degree of detail necessary in the orders. In the open terrain of France in 1940 only three sentences were necessary for the panzers, whereas on the Eastern Front, and later in the war, the conduct of complex withdrawal or defensive operations required more specific information. A typical panzer division order on the Eastern Front from corps would generally include the objective, route, speed, sequence, departure time, and the division commander's new location for the issuance of subsequent orders.¹⁵

Also of real importance in the German system was the fact that the battle intentions of division and regiment were virtually always made known to the battalions. Changes in operations or missions were simply handled by fragmentary orders issued by the quickest means—radio, telephone, or dispatch rider. But even without orders, commanders and men were expected to use initiative and not to delay necessary actions by waiting for direction from higher headquarters.

Tactical headquarters were kept as far forward as possible. This demonstrated resolve and stability to the soldiers and at the same time permitted the commander and his staff rapidly to size up a battle situation,

make timely decisions, and act.¹⁶ These tactical battle headquarters normally had a maximum span of control of about four subordinate units; divisions were not capable of controlling in battle six battalions at the same time. To help overcome span-of-control problems, it was mandatory that subordinate units assign liaison officers to the division headquarters. These were experienced officers who were permitted to see and hear what was going on and then report back to their units with messages, information, maps, orders, etc. Liaison officers were a vital link in the command and control of the division.

In the *Wehrmacht* experience the only way to defeat the Russian attack was to have defenses in depth with mobile reserves on hand to react immediately to enemy advances. As already pointed out, Russian strongpoints established in the rear of front-line defenses had to be eliminated quickly, before the Russians could reinforce them to the degree that they would become severe threats.¹⁷

The Germans continually sought to keep from piecemealing their tank units to cope with these advances. Panzers would often move at night with the infantry and attack to eliminate those enemy units that had infiltrated in the dark. It was more effective to wait and mass as much of the panzer division during the night as possible, even if the situation was bad. Although difficult to accomplish under the circumstances, unit commanders tried to allocate time for the units to prepare for these unanticipated missions, but this was not always possible.

The critical task for the commander and staff was to identify the *schwerpunkt* of the attack, that is, the main thrust or objective of the enemy effort. Without knowing this it would be impossible to know where and how to react to destroy and defeat him. This was the reason that German doctrine did not espouse killing zones or fire pockets; it was never certain where the enemy would attack, or whether it would be possible to destroy him in the pocket even if he arrived.¹⁸

When German front-line units were penetrated, they continued to fight in-

dependently and worked to reestablish a cohesive defensive line. If ordered to withdraw, the infantry was given a line and boundaries to establish, regardless of pressure. They fought at day and moved at night with little opportunity for rest, often exfiltrating through Soviet units to their rear. Even in these times of great stress, morale throughout the army was generally extremely high. During the great Eastern Front battles in 1943-44, divisions would not know until 1000 hours the next morning the approximate losses from the night before, and the commander would have to walk or drive his front line to discover where his units were positioned. Usually by the end of the day hundreds of the "casualties" reported in the morning would start to filter back in and find their units, having fought independently or having been cut off or wounded since the night before.¹⁹

This fluid situation demanded spirit and initiative from the troops. Fortunately, defending units were rarely surprised by the enemy attacks because Russian artillery and radio intercepts usually gave away the timing, location, and attack direction of the assaulting ground units. In most cases, the Germans knew everything but the strength of impending attacks. One objective in the defense was to degrade the tempo of enemy attacks by forcing units to deploy at critical points, then mauling the stalled formations in depth. To that end, an effective technique for rapid fire support was to station an air force liaison pilot in a tank close to the tank unit commander to coordinate immediate air strikes on enemy targets of opportunity. While the Germans used air to good advantage, Russian aircraft at this stage of the war had little influence on German operations. In the West, however, Allied Thunderbolts ranged inland throughout France up to 170 kilometers deep, making daytime movement difficult and hazardous.

The German army of this era was still mainly dismounted infantry with many horses in the supply and artillery columns. These units walked to Kursk and back without being destroyed or overrun by Russian mobile units. Despite Guderian's

own mobile doctrine, the German infantry kept up. One effort to increase the mobility of the infantry was the formation of motorcycle battalions. These units were employed early in the war and were able to react rapidly, but they suffered too many casualties and were abandoned. Half-tracked vehicles provided much more protection. These Panzer Grenadier units were designed to accompany the tanks in battle as follow-on forces to mop up the bypassed enemy, or to lead on foot if the terrain dictated.

As the war progressed, experience taught that combat groups were the best configurations for battle units. These had artillery, infantry, tanks, and engineers and other specialists as required. Normally they were given the simple order to "Destroy the enemy." The German officers believed that destroying enemy forces was the correct aim and could be achieved by many means. A common mistake of inexperienced commanders was that of holding or focusing on terrain as an objective in itself.²⁰

The German way of life had much to do with the education of the soldier and a German's approach to military service. Values such as self-sufficiency, independence, and taking the initiative lent themselves naturally to the development of good professional soldiers. But character came first. Of all things in war it has perhaps the greatest weight. Moreover, it cannot be broken between one's professional and private lives, but is a constant in both realms of a man's existence.²¹

In the *Wehrmacht* it was the subject of direct comment in officer reports, with those identified as lacking this essential quality (or recognized to be "climbers") removed from the service. An adage for the General Staff officer was "to be more than you seem, and do more than you appear to."²²

At the core of the education of German officers were the ideals of duty, patriotism, and modesty. To these ideals were added such undergirding principles as the ability to take responsibility, intellectual flexibility, initiative, and decision-making strength and simplicity. Through all of an officer's

education and training, the individual's decision was honored, and if wrong, corrected without condemnation. To do otherwise would have stifled initiative.

With this educational approach, officers who completed the military schools found it unnecessary to receive detailed specifics from higher headquarters in orders and directives. Their disciplined operational approach, analytical skills, and self-reliance had been instilled throughout the officer corps. Their thinking was not limited to specified doctrine or techniques but had more to do with a professional devotion to fulfilling the commander's intentions. Orders should make the commander's intentions clear; staffs and subordinates thereafter would take the actions needed to bring the intentions to fruition. The system hinged, however, on the selection of quality men for the officer corps; this was a singularly critical component for success.²³

The officer education process began with a cadet officer being assigned to a unit and living with the troops as a private for six months. Thus all officer candidates learned the basic skills of war that enlisted men had to know. Following successful completion of this stage, the "private" cadet was promoted to corporal and, for the infantry officer, then sent to the infantry school for a year. Having done all this he finally arrived at the regiment, still a cadet, but now permitted to serve as a platoon leader. If he did well and received the recommendations of his superiors, he was given the opportunity to compete for attendance at the *Kriegsakademie* in Berlin by taking competitive examinations, which could be taken at the earliest after only six years' service.

The foundation of the General Staff was the *Kriegsakademie*, where the course of instruction took three years for those selected. Central to the instruction was an emphasis on the need for the officer to estimate a situation quickly, to draw from it the essence of the problem and the critical facts, and then to make quick, clear-cut decisions. Each day's study included different operational problems and compelled each student to analyze them and make decisions.

The development and thought processes drove officers to work at least one rank above their present one to prepare them to assume greater responsibilities without hesitation or a lack of confidence.

One highly effective educational aid was the eight-day staff ride that all *Kriegsakademie* officers made under the watchful eye of a senior general. The focus was education of the officers at the division and corps levels, and the ride involved a combination of map and terrain work in the countryside. Each student's work was critiqued by the senior officer present. Of additional value in training officers was a two-sided free-play war game, whose goal really had nothing to do with winning; the game was designed, rather, to train officers to make decisions and to take responsibility and initiative.²⁴

Coupled with this excellent military education system, most officers had lengthy service at the regimental level, which balanced the academic with the practical. Before the war, unit commanders would gather their officers in a group and review tactical lessons and procedures as reinforcement of what the schools and their experience had provided. An interesting footnote to this era is that Rommel's book *Infantry Attacks* was used extensively as a training document and was highly influential during the interwar years.²⁵

During the war the various branch schools adapted their instruction to the lessons from the battlefield and the capabilities of new German equipment, but the *Kriegsakademie* closed except for a three-month refresher course. As the war progressed, the reduced emphasis on education created problems. Losses among the most skilled and well-trained officers made it necessary to issue longer and more detailed orders and directives; younger officers had not had the benefits of a thorough education, and to get the same results more specific information had to be given to subordinate commanders.²⁶

General Heinz Guderian, chief of the armored forces, worked to overcome educational and training handicaps by publishing a bimonthly periodical with the latest in-

formation on tactics and equipment, and with useful information on the enemy. He often went straight to the units, bypassing all intermediate headquarters, with material he believed was critical to battlefield success. It was not uncommon for him to arrive unannounced at a battalion headquarters and quiz leaders and men on the latest information he had distributed.

One of the most significant contrasts that might be drawn against the German experience is that units today seem to evaluate procedural particulars that may have little use in combat. One of the keys to the German successes against the Russians was the ability to react quickly, reconstitute, and continue the mission despite the mauling their units endured day after day.²⁷ Division, corps, and army staffs were small and contained few decision-makers. The decision process was usually very fast and not characterized by exhaustive details and analyses by the staff and specialists. This was accompanied, however, by very competent and detailed ongoing staff work and superb staff planning and execution once decisions had been made. Moreover, the speed with which decisions could be reached was probably a result of the intangible but important intimacy, trust, and confidence the German officers developed among themselves over the many years of military service they had spent together. They were essentially familiar with their contemporaries' personalities and professional aptitudes.²⁸

Some of the simple procedures used to avoid bureaucratic miring seem obvious enough, but in most armies they never seem to be used with the regularity needed to become ingrained and effective. The commanders generally visited their subordinate units three or four times each day, and the chief of staff went forward every three or four days to remain in touch with actual developments. In this way the key decision-makers were intimately abreast of developments and could quickly make sound decisions. Normally the chief of staff personally called the regiments each hour for situation reports, and every two hours

personally called the corps chief of staff to update him. When a commander returned from his visits to the units, the chief briefed him and advised him of the decisions he had made, for the chief exercised the same force of authority as the commander, although it was clear that the commander always carried the weight of responsibility for the command and the final decision. While the commander was afield, he routinely informed the chief immediately if he made any important decisions so that both were constantly in the picture and could act interchangeably. Under such circumstances the chief and commander worked in synchronization in an atmosphere of mutual confidence.²⁹

A rhythm was maintained in the headquarters operations whenever possible. At the division level, orders were routinely received at about 2200 hours for the next day's operations, and by midnight the division had translated those orders into regimental objectives and dispatched them by the fastest means down to the regiments.³⁰ For a typical corps chief of staff, the most important part of the day was his 0600 staff meeting with the G2 and the G3 to review the latest situation, the plans for the day, and any adjustments that had to be made.³¹

The subject of sufficient planning time for new missions was viewed as an unknown. Units and staffs were not conditioned to expect "sufficient" time to think through each mission given, because in combat there was no way of knowing what the situation would allow. To come to rely on some imaginary increment of time as necessary to execute a mission properly would subtly inject a degree of doubt, if that time did not materialize, into the minds of the leaders before the operation ever commenced. That could create dangerous reservations among leaders and led before battle was joined. The men and unit must simply improvise and conduct the operation to the best of their capabilities under the prevailing conditions.

Intelligence played a continuing and important part of staff operations and was responsible for many successes. In fact, the Germans often had a thorough knowledge of Soviet troop dispositions; history has shown

that their intelligence reports were amazingly accurate. The sources used were, in order of importance, radio intercepts, air reconnaissance, POW interrogation—especially of high-ranking POWs, captured documents, German agents behind the lines, and enemy agents.³²

While NATO cannot duplicate the *Wehrmacht's* officer education and selection procedures and thereby recreate conditions wherein *Auftragstaktik* can be fully employed, it can take other actions to achieve the responsiveness that proved so important during World War II. First, NATO's corps and division headquarters, which are currently huge and unwieldy (both in decision-making and deployment), could be trimmed to the point of streamlined efficiency. They then could be deployed much closer to the front. Also, NATO exercises could be much more productive if made to incorporate free play. This would encourage initiative and boldness, which are essential to a successful defense against a Soviet invasion. Current exercises encourage an outlook reminiscent of the Maginot Line train of thought. In recent years NATO commanders have not participated in the war games except in a most perfunctory way, certainly a destructive trend in terms of developing sound tactics and clear staff officer thinking. We have given over to computers too many functions and so denied commanders and staff officers any real knowledge of the enemy, producing a wholly artificial perception of the realities of European combat.³³

In addition to reducing headquarters staffs and improving field exercises, the United States Army could probably benefit from adopting some of the attitudes and personnel practices of the *Wehrmacht*. First, it is apparent that the importance of good staff work at the corps level and below was well appreciated in the *Wehrmacht*. This is often overlooked in the US Army; rather than understanding the importance of good staff officers, we too often tend to look upon staff work with some disdain, as something to be avoided if possible.

Second, neither do we appreciate the importance of individual intelligence in selecting officers for military schooling. The OER, which serves as the basis for virtually all selections in the US Army, is an imperfect tool designed to assess job performance. It has no capacity, other than through purely subjective comments, for evaluating potential intellectual abilities. Current procedures preclude the consistent selection of the best-qualified officers for higher military education. Surely we could profit from change in this regard. In the collegiate academic environment, standardized tests ensure that quality students receive the opportunities available from the finest institutions. Indeed, competitive examinations both for promotion and for advanced military education are common in most modern armies; they should be implemented in the American military system as well.

Third, the evidence is strong that German battlefield prowess resulted in large measure from their officer education process. The US Army should take this important cue and realize that German officers were *educated* in their profession, not simply trained. That is, they understood *why* a particular action should be taken, not just *how* to do it. Our schools often assume that a checklist of lessons is sufficient, although the man who created the list is frequently the only one fully able to apply the lessons properly.

Fourth, we should perhaps integrate officer candidates—from all sources of commissioning—with normal basic training. A shared experience forms the basis of a bond of trust and confidence, and graduates of the US Military Academy and the ROTC program routinely share no such common experience with their soldiers. Seeing future officers undergoing the basic soldier's experience should preclude any thought on the common soldier's part that soldiering is demeaning.

Fifth, soldiers of all ranks need to talk with each other candidly and often. Conversations between seniors and juniors should not be the one-way, pro forma sessions so often characterized on screen and page and

too frequently emulated in the real Army. Moreover, formal staff briefings, which often inhibit real communication, might productively give way to less rigid discussions between commanders and their staffs. Genuine two-way communication is far more effective for information exchange; we need to pay more attention to what is said than to the form of presentation.

Sixth, the rapid exploitation of accurate intelligence confers a tremendous advantage. The Germans had the capacity to acquire and then use information about the Russians to great benefit. This is a weakness in the US military structure today, despite the staggering array of technical aids that surround the commander. Technology will not pay all the bills, however. Doctrine, force structure, training, and education are the stones upon which the timely use of intelligence must be built.

Finally, it may be that the most important lesson is the most obvious, though the least recognized and the most challenging to absorb. The Germans had what can only be described as a "doctrinal anchor" around which the tactical and operational levels of war were built. It was consistent but flexible. Through concept and combat the Germans melded equipment, force structure, unit organization, tactics, techniques, and command and control measures into a battle doctrine which was clearly understood and which inspired great confidence. This was the blitzkrieg.

The American Army has no such doctrinal foundation today. Over the last decade or more, the Army seems to have navigated the doctrinal seas without a rudder, changing course so often as to confuse all the operators and executors from top to bottom. We have finally arrived at a port we expect to build upon in the years ahead, but it is certainly not ready for extensive use today—AirLand Battle. If this were not troublesome enough, blending the doctrinal philosophies and practical aspects of the several NATO partners into a cohesive, energy-charged battle force raises discomfiting speculation on its effectiveness, especially when the most influential partner is himself confused. This

handicap is not measurable and by its nature is certainly subjective, but it may be NATO's most significant weakness and the one with the greatest potential for exploitation by the Soviets.

In sum, the German experience on the Eastern Front in World War II continues to be a fertile field for ideas regarding our situation in Europe. We need not slavishly emulate the *Wehrmacht*, but we ignore their experiences at our peril. Since the Second World War the nature of soldiers has not changed radically, nor have the classic lessons of maneuver warfare been altered. For these reasons the *Wehrmacht* experience, properly considered, has substantial value and is worthy of serious review by all NATO partners.

NOTES

1. During the period 26-30 March 1984, the US Army War College hosted a symposium on operations on the Eastern Front 1942-43 as part of the Art of War Colloquium, an informal society of those dedicated to increasing the professionalism of the US Army officer corps. Entitled "Operations on the Eastern Front 1942-43 and Their Relevance to the Problem of Defending the Central Region of NATO," the symposium was a historic event. It attracted a highly respected group of former German officers and other participants, who freely exchanged experiences and thoughts on the Eastern Front campaigns and NATO. The objective of the symposium was to study large-unit operations against Soviet mechanized forces and to relate the lessons learned from these operations to the employment of mobile warfare in defense of NATO. The German contributors included: General Ferdinand M. von Senger, former NATO CINCENT; General a. D. Graf J. A. von Keilmansegg, Operations Section OKH (WW II) and NATO CENTAG Commander; General Hans von Blumroeder, G2, Army Group South (WW II); General a. D. Gerd Niepold, G3, 6th Panzer Division at Kursk (WW II) and NATO Corps Commander; Generalmajor a. D. Carl Wagener, Chief of Staff, 40th Panzer Corps (WW II), Chief of Staff, 5th Panzer Army (WW II); Generalmajor F. W. von Mellenthin,

Chief of Staff, 48th Panzer Corps (WW II), Chief of Staff, Army Group "G" (WW II); Brigadiergeneral a. D. Edward Lingenthal, 11th Panzer Division (WW II) and *Bundeswehr*; Oberst a. D. Helmut Ritgen, 6th Panzer Division (WW II) and *Bundeswehr*; and Dr. Dieter Ose, Historian, Militaergeschichtliches Forschungsamt, FRG. Other participants were: General Nigel Bagnall, British Army, CINC NORTHAG; Major General J. C. Reilly, British Army, Director of Battle Development; Brigadier Richard Simpkin, British Army, retired; Colonel Paul Adair, British Army; Brigadier General P. H. C. Carew, Canadian Armed Forces, Deputy Chief, Research and Analysis; Lieutenant Colonel Jack English, Canadian Armed Forces; Colonel Wallace Franz, US Army; Lieutenant Colonel David Giantz, US Army; and Professor Bela Kiraly, former head of the Hungarian War College (1951) and campaigned with the Soviets in WW II.

2. Remarks by Generalmajor von Mellenthin.
3. Idem.
4. Idem.
5. Idem.
6. Idem.
7. Remarks by Generalmajor Carl Wagener.
8. Idem.
9. Remarks by General von Blumroeder.
10. Remarks by General von Keilmansegg.
11. Remarks by Generalmajor von Mellenthin.
12. Remarks by General von Blumroeder.
13. Remarks by Generalmajor Carl Wagener.
14. Remarks by Generalmajor von Mellenthin.
15. Remarks by General Gerd Niepold.
16. Remarks by Generalmajor Carl Wagener.
17. Remarks by Generalmajor von Mellenthin.
18. Remarks by General Gerd Niepold.
19. Idem.
20. Remarks by Generalmajors von Mellenthin and Wagener.
21. Remarks by General von Keilmansegg, General von Blumroeder, Generalmajor Wagener, Generalmajor von Mellenthin, Brigadiergeneral Lingenthal.
22. Remarks by Generalmajor Carl Wagener.
23. Idem.
24. Remarks by General von Keilmansegg.
25. Remarks by Generalmajor von Mellenthin.
26. Remarks by General von Keilmansegg and Generalmajor Carl Wagener.
27. Remarks by General von Senger.
28. Remarks by General Gerd Niepold.
29. Remarks by Generalmajor von Mellenthin.
30. Remarks by General Gerd Niepold.
31. Remarks by Generalmajor von Mellenthin.
32. Remarks by General von Blumroeder.
33. Remarks by General von Senger.

