



Blitzkrieg:
Operational Art or Tactical Craft?

A Monograph
by
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Field Artillery



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13. ABSTRACT (Maximum 200 words) <i>Blitzkrieg</i> has been variously described as strategy, tactics, and even operational art. This ambiguity, coupled with a misinterpretation of this form of offensive combat, can cause false conclusions when studying the history of World War II and trying to relate this history to modern practice. <i>Blitzkrieg</i> was the tactical means the Germans used to pursue their strategy in World War II. Applied against an enemy that was temporarily inferior in doctrine and technology, it was a great success and led to the aura which surrounds the word. This paper examines <i>Blitzkrieg</i> from a tactical and operational perspective. The result is an appreciation of where <i>Blitzkrieg</i> falls in the conceptual and theoretical realm of warfare. The first section examines <i>Blitzkrieg</i> from a theoretical perspective. The German practice of this form of maneuver warfare concentrated on battles of encirclement which would annihilate enemy forces. This analysis compares the German practice with the theoretical basis of tactical deep battle. The result is a redefinition of <i>Blitzkrieg</i> as a tactical form of maneuver. The second section is an introduction of the characteristics of operational art. <i>Blitzkrieg</i>, rather than an expression of operational art, was instead a characteristic. Finally, two events, the German invasion of France in 1940, and the plans for the Summer offensive of 1942 are examined to determine the validity of the claim that <i>Blitzkrieg</i> is a tactical rather than operational action. The central point of this section is the comparison of these operations. They demonstrate the evolution of operational art in the German Army. The result is a redefinition of <i>Blitzkrieg</i> as a purely tactical action, one that never transcended tactics to the operational level.					
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INTRODUCTION

Blitzkrieg has been variously described as strategy, tactics, and even operational art. This ambiguity, coupled with a misinterpretation of this form of offensive combat, can cause false conclusions when studying the history of World War II and trying to relate this history to modern practice.

As the US Army continues the study of operational art, the tendency to search for examples in the past increases. Our recent victory in the Persian Gulf emphasized the importance of not only offensive-oriented doctrine, but also operational art. Interestingly, British and American news accounts of the German Army's sweep into France in the spring of 1940 are surprisingly similar to accounts of US Army actions in Desert Storm. These accounts emphasized the tactical effects of an innovative method of waging war. Were they in fact similar? As our understanding of operational art progresses, we should draw a distinction between the tactics of a *Blitzkrieg*, and the potential effects of a tactical innovation on the operational art.

Blitzkrieg, as practiced by the German Armed Forces in World War II, was a tactical action executed with extreme competence. It was primarily an expression of tactical deep battle. As such, it offers the potential for operational level action, and indeed, was the transition point to operational art, thus the confusion surrounding the term. In some instances, the Germans were able to propel this tactical form of maneuver to the higher level of operational art. It is not, however, as some insist, a consistent expression of operational art, nor is it a manifestation of strategy. This paper is an attempt to analyze, define and classify this equivocal term *Blitzkrieg* to determine where it falls in the conceptual realm of warfare.

Examination of *Blitzkrieg* requires an insight into the basic characteristics of German warfighting in World War II, as we understand them today. These basics consist of an appreciation of the theoretical, tactical situation behind the development of *Blitzkrieg*. Other sections examine the impact of the German General Staff on the formulation of *Blitzkrieg* tactics and the beginnings of operational thinking in the German Army. First, however, we must define the term

***Blitzkrieg* Defined**

Blitzkrieg literally means lightning war. This is the **translation** of the term. The **interpretation** of *Blitzkrieg* includes many ideas that have nothing to do with this expression of warfare. As already noted, some believe *Blitzkrieg* is a strategy developed by Hitler, others think it operational art. A commonly accepted definition is "a strategy [based] upon a series of local wars, each to win an easily attainable objective in a short, ~~swift~~, decisive campaign."¹ Such a definition, however, posits a synchronization of the strategic, operational and tactical levels of war that, in most cases is not apparent in the conduct of *Blitzkrieg*.

For purposes of this paper, the following definition of *Blitzkrieg* is proposed:

Blitzkrieg is a tactical form of maneuver consisting of a breakthrough, or envelopment, or both. It can be used in both offensive and defensive engagements. In a positional-type battle, the breakthrough opens a hole in enemy defenses allowing the envelopment procedure to develop. It was designed to encircle and destroy enemy forces, and to avoid the stalemates of World War I. Initiative is the key characteristic of this form of maneuver as it allows the attacker to set the conditions, the time and the place of the attack. The name conveys the speed and force, and effect of the attack.²

It is unfortunate that the *effect* of this form of maneuver, the paralysis resulting from this lightning bolt or attack, came to signify its method. *Blitzkrieg* is

simply a swiftly executed encirclement that presents an enemy force with an unenviable choice: annihilation or surrender. It only has the potential to contribute to the operational level of war, a potential seldom realized.

***BLITZKRIEG* IN MILITARY THOUGHT**

Before examining the theoretical basis of *Blitzkrieg*, the intellectual climate of the German Army must be considered. This thought influenced the theory developed on *Blitzkrieg*, and set the stage for the further development of operational thought.

Blitzkrieg developed as a result of strategic exigencies and the hard-learned lessons of positional warfare. Military strategy is a subordinate element of national strategy. In Nazi Germany, military strategy, and thus doctrine, was the responsibility of the German General staff. Examination of *Blitzkrieg* in military strategy, therefore, requires an evaluation of the impact of the military culture of the German General staff. Of course, military strategy requires a clearly definable national strategy. In Nazi Germany, the military developed its own strategy based on its institutional memory, and a perception of the end-state of each operation. This kind of methodology can only accomplish limited objectives and would never be entirely successful.

The German General Staff has been examined in detail elsewhere, and we will not repeat those findings. Instead, this section focuses on the writings of some of the more famous members that institution, and the thought it produced. These officers started a trend that influenced establishing *Blitzkrieg* as the tactical answer to the changing nature of warfare, independent of any national strategy. The institution collected and disseminated the thought that represented the distilled lessons of World War I, creating the military strategic basis for *Blitzkrieg*.

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The first prominent member of the institution was Clausewitz. His theory of warfare became the "bible" for the General Staff. Although often misinterpreted and more often read and quoted, than understood, his work provided a common starting point for the institution. In fact, "Clausewitz [furnished] the unified intellectual foundation for the General staff."³ He engenders German military thinking and certainly influenced Moltke, a key contributor to *Blitzkrieg*.

If Clausewitz was the foundation of German military thought, "... its comprehensive form, its highest honor, it owes to Helmut von Moltke."⁴ In fact, Moltke personifies the dominant ideas manifest in German warfighting style through the Second World War. Moltke was fond of quoting Napoleon's dictum, "I never plan beyond the first battle." From this thought Moltke developed his own maxim,

No war plan extends beyond the first meeting engagement with the hostile forces. Only the layman believes that the course of the campaign has followed a predetermined course, which has been planned in detail far in advance, and has been clung to tenaciously to the bitter end.⁵

Examination of *Blitzkrieg* suggests that this philosophy, already institutionalized in the General Staff as early as 1880, became one of its guiding principles.

There is a dichotomy here, however. Moltke, while seemingly convinced of the futility of planning future moves in detail, nevertheless believed:

The first general success will therefore be accomplished by a number of minor successes achieved by armies or groups of armies in the compartments of the terrain created by geography and fortifications. *The difficult task of the higher leadership is to coordinate these local successes, and even defeats, so as to bring about a definite victory for the entire force. The tactical results of battles are phase lines for new strategic [operational] decisions* (emphasis added).⁶

Moltke's axiom stresses the results of the first engagement, not the first exchange of blows. The results of the first engagement obviously depend on the

tactics employed by both sides, thus the intense German interest in tactical affairs. Coordination of these tactical actions to attain a greater goal is the essence of operational art. Thus, while on one hand the accent is on preparing the plan for the first battle with an unstated, but real requirement for *ad hoc* execution, Moltke advocated a linkage of all actions of the plan. Such a linkage is the basis for the practice of operational art, for the battles of a campaign must fit into a mosaic that is the operational plan.

Count Alfred von Schlieffen was the second major player in the institution. He was enamored of the Cannae example of decisive battle, and his plans for the conquest of France reflect this preoccupation. An emphasis on tactics and the belief in the possibility of a repetition of a Cannae-type battle were Schlieffen's bequests on the General Staff. Unfortunately Moltke the Younger's modifications shifted responsibility for the disaster that became World War I, from Schlieffen to himself, thus institutionalizing a bad lesson concerning the efficacy of Cannae-type battles in an age of mobile, more lethal warfare.

Schlieffen was primarily a technician, albeit a technician well versed in tactical application. A tireless worker,

... he prided himself on being completely 'un-political,' forgetting Clausewitz' wise dictum that 'war admittedly has its own grammar but not its own logic,' which must be supplied by politics. Few objective critics would deny that Schlieffen was a superb grammarian; but that was unfortunately not enough.⁷

If an operational planner ignores the political-strategic side of war, and Schlieffen's focus was on the tactical level, then it is impossible for those plans to appropriately fulfill political objectives. Schlieffen not only concentrated on tactical matters, he also turned the General Staff to purely technical and tactical answers to the military problems facing Germany.

[He] constantly emphasized the idea of extermination [annihilation] with double tactical and strategic envelopment (Cannae). As a result of a cer-

tain one-sidedness in operational ideas caused by this emphasis, instruction in the theories of Frederick the Great, Napoleon and Clausewitz was perhaps sometimes neglected, but the students were taught the value of boldness.⁸

Both Moltke and Schlieffen focused on the annihilation of the enemy army. They differed, however, in their approach to planning. Moltke asked the questions, "Where stands the enemy; what will he do; where will his main effort be?"⁹ Schlieffen, on the other hand, wanted to force his will on the enemy. Thus, his planning focused on his own actions, and their presumed effect on the enemy.¹⁰

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The German General Staff, in the person of its leaders, is the source of all German Army doctrine. The doctrine developed as a result of the experiences of World War I concentrated on annihilation, a search for decisive battle.¹¹ *Blitzkrieg* provided a quick resolution to battles, and thus the answer to the tactical dilemma of World War I. Unfortunately, the focus of all doctrine was the tactical level. This focus precluded consideration of higher levels of war, including the operational.

BLITZKRIEG IN THEORY

A major interest in *Blitzkrieg* highlights its mechanics and concentrates on the tactical aspects and effect of this form of maneuver. These effects include enemy reactions, as well as the implied necessity to finish (lightning war) the battles quickly. These interpretations are not mutually exclusive. On the contrary, they often mark the boundary between the levels of war analyzed in this paper.

As already noted, German Army doctrine, at least since the age of Moltke, concentrated on the destruction or annihilation of the enemy by

encirclement.¹² Annihilation was predicated on finding or forcing an open flank and encircling the enemy. Once encircled the enemy's line of retreat was severed, thus rendering that force useless. The entire encirclement sought to defeat the enemy army, thus providing a decisive victory. In essence, this was a tactical battle, writ large.

The development of *Blitzkrieg* before World War II is a direct result of the conditions the German Army experienced in the First War. What we call *Blitzkrieg* developed as an answer to the frontal attack.

The frontal attack pushes the enemy back on his own lines of communication, it interrupts, but doesn't destroy him. An encirclement that is executed with sufficient strength, however, leads to the enemy's annihilation, especially when the attack is directed against the flanks and rear.¹³

The experiences of the deadly, and often futile assaults of the First World War, emphasized this lesson. The Germans believed the only way to defeat an enemy force was to cut it off. Cutting it off required superior mobility relative to the enemy force. The introduction of mechanical means on the battlefield provided the Germans the answer to this deadlock. Tanks and other armored vehicles gave the German Army the ability to force the enemy to react to their new found mobility.¹⁴

Today, *Blitzkrieg* belongs to the category of tactical deep battle as defined by the Soviets.¹⁵ Tactical deep battle consists of a penetration (if necessary) and/or envelopment of an enemy flank to destroy the front line defensive units.¹⁶ Tactical deep battle is normally limited to the enemy's tactical depth defined as:

...that [area] which is occupied by defending units whose missions severely restrict their freedom of maneuver, and the continued occupation of which will maintain the integrity of the defense thereby denying the attacker the opportunity to destroy or disrupt the mass of defending forces by maneuver.¹⁷

The aim of tactical deep battle or *Blitzkrieg* is to destroy the enemy main tactical defensive forces by encircling, then destroying them. To destroy the tactical defense, the attacker must engage and destroy the tactical commanders reserve, that tactical formation that exists to provide the tactical commander the ability to react to unexpected enemy actions. Tactical deep battle also sets the conditions for a transition to the operational level of war.

The depth of the attack is determined by the *strength, location, and reaction* of the defense. The strength of the defense decides the speed, viability, and feasibility of the attack. For ground forces, this translates to the disposition of the defender's defenses, including maneuver forces, as well as other means of countering an attack, artillery for instance.

Location refers, not to the disposition of forces, (which is covered by strength) but to the whereabouts of the reserve. Since the reserve could conceivably deny the attacking force commander freedom of action, it must be destroyed, or at least rendered useless. Destruction of this force represents success of deep battle at the tactical level because the defending commander's options to react are negated. It is important to note, therefore, that depth, in terms of ground distance is irrelevant. Depth, instead, is directly related to the defensive posture of the unit under attack.

Reactions are those actions taken by the defending commander, and depend on timeliness. Thus, tactical depth (for the attacker), depends on the enemy's defenses. Similarly, in a meeting engagement, the enemy's tactical depth is determined by those assets, maneuver forces or firepower, able to react to the deep attack. Since strength, location and reaction are key to depth and success, the preconditions for success are created by attacking the enemy on a broad front.¹⁸ Attacking on a broad front fixes enemy front-line formations to prevent reaction to a penetration. Broad front attacks also require the defender

to position forces along the entire front. Since force, here manpower, is a finite resource, the broader the front, the less force available to counter enemy penetrations.

In the World War II application of *Blitzkrieg*, tactical depth and the forces located there were the keys to success. This success however, created only tactical victories. There is a difference between tactical and operational depth, and that difference is a changing function of the enemy, and more importantly, friendly actions. While the Germans were generally aware of the difference, it was often overlooked.

By pursuing *Blitzkrieg* the German Army sought the decisive battle that would annihilate all resistance. The changing nature of war, a function of the technological developments that the Germans themselves had exploited, expanded the battlefield so the decisive battle was no longer within reach. *Blitzkrieg*, instead of being the decisive tool, only accomplished the first step in what would require a long series of operations to cover the battlefield and destroy an enemy spread out in both space and time.

The Characteristics of *Blitzkrieg*

Blitzkrieg, as a form of maneuver, has various characteristics. These characteristics include initiative, speed, penetration and envelopment, and depth. This section examines these theoretical concepts to evaluate properly *Blitzkrieg* as a tactical endeavor rather than a doctrine of campaigns.

Initiative

Of all the characteristics noted, initiative is essential to the proper execution of *Blitzkrieg*.¹⁹ Closely related to initiative are the ideas of *Auftragstaktik* and freedom of action. The commander executing *Blitzkrieg* required a firm idea of the higher commander's intent, and above all that commander's trust. *Auftragstaktik* also signified a contract of trust (another interpretation of the word)

between the commander and subordinate. An example of *Auftragstaktik* is the action of General Heinz Guderian in France in 1940.

Guderian well understood the intent of the attack he spearheaded. That intent was to penetrate rapidly the French defenses and trap all Allied forces in a pocket between Army Group A in the South and Army Group B in the North. Therefore, he decided to continue the attack without waiting for reinforcements, and in violation of directives and orders to wait. Such actions taken on initiative, deny the enemy commander freedom of action, a desired effect of *Blitzkrieg*. Additionally, this initiative fuels and supports the momentum already building in the attack.

In the attack, defending forces not yet aware of the attacker's intentions are hard-pressed to form a coherent defense. When the attacker suddenly appears in the enemy rear, the fruits of the initiative are evident. Initiative allows the setting of conditions, time, location and objective of the attack or defense.²⁰ Success depends on a defender being forced to react to the actions of an attacker. In fact, the Germans believed initiative was a vital precondition for the success of *Blitzkrieg*.²¹

A direct result of an emphasis on initiative is the strong self-reliance that it breeds. German soldiers were taught to seize any opportunity. Thus Guderian pressed for continuing the attack in France in 1940, secure in the knowledge of both his own abilities as well as the fact that he was satisfying the intent of the operation.

The final result of initiative is the freedom of action that it denies for the enemy and gains for the attacker. Freedom of action, much like initiative is a zero sum game: loss on one side accrues to the other side. Freedom of action allows the attacking force to set present conditions, but more importantly, allows that force to dictate the subsequent conduct of operation.

While initiative was the theoretical strongpoint of *Blitzkrieg*, it is also that one factor Hitler denied to the appropriate commanders. In 1940, Guderian continued the attack on his own initiative. By 1942, distrust of the Army General Staff and the Army caused Hitler to withhold all subordinate initiative:

On principle no leader of an Army Group or even of an Army has the right to undertake on his own a so-called tactical evasive movement without explicit authorization.²²

By 1945, this policy resulted in explicit orders requiring division commanders to request authorization to carry out tactical moves, withdraw, and abandon strongpoints.²³ To an army built on trust and *Auftragstaktik*, such requirements not only stifled operational thinking, it proved fatal.

Speed

The speed of the *Blitzkrieg* is legendary. Historical accounts of French officers on outings overwhelmed by advancing German columns during the Battle of France attest to this fact. The speed of *Blitzkrieg* gained surprise, and surprise gained more speed. Surprise and speed together added an intangible, yet militarily significant advantage to the German forces that built on the momentum described above.

Speed allows the attacker to paralyze in-place enemy forces by moving faster than they can. This speed is not limited to velocity, but includes the ability of German commanders to assess the situation rapidly and act before the enemy. And paralysis is not limited to physical paralysis, but also includes the inability to react to the situation presented. Speed came as a result of initiative, and allowed the Germans to retain the initiative by paralyzing the enemy, and ensuring their own freedom of action.

A related aspect of speed in *Blitzkrieg* is tempo. Tempo is a measure of the speed and direction of mass against an opposing force, and equals,

the total distance from initial concentration area to final operational objective divided by the time from receipt of orders by the executing formation to accomplishment or abandonment of its mission.²⁴

Thus tempo not only determines combat power, it is combat power. It is analogous to the gathering speed of a train, and includes the idea of momentum. It depends on concentration and its effects produce the momentum that in most cases prevent an enemy from reacting in time.

Penetration

The penetration or breakthrough as the Germans called it, ruptures enemy defenses. Conceptually, it is overwhelming force applied at a point in the enemy line to force an opening. This opening is the first stage of tactical deep battle in its *Blitzkrieg* form, and is the postulated "beginning of the end," for the defending force.

A penetration or breakthrough is necessary when the enemy offers no exposed flanks. In fact, the German Army from the time of Moltke had discarded the idea of breakthrough, finding it too costly because of the effects of modern weapons.²⁵

The increase in numerical strength of the armies and the probability that they would fill completely all available space along the frontier made it look improbable before 1914 that the Napoleonic kind of breakthrough could happen.²⁶

However, the extended fronts of World War, I, also forced the German Army to reconsider the idea of penetration, and develop tactics to overcome the resistance of an in-place defender. Conditions in both the Western front in 1940, and the Eastern front throughout the war, proved the necessity of a breakthrough attack.

This reexamination distinguished between the two kinds of breakthrough, one in a mobile-type of battle, and the other in a static, or positional-type of battle. In a mobile engagement, breakthrough is difficult, if not impossible,

because of the fluidity of following forces. The flow of these forces on the battlefield represents a situation in which any weaknesses or even gaps caused by the movement are quickly sealed by following elements. While it was conceivable that an attacker could exploit a gap between forces, the likelihood of finding it was slim. Figure 1 portrays the Battle of Ligny, a successful mobile penetration.²⁷

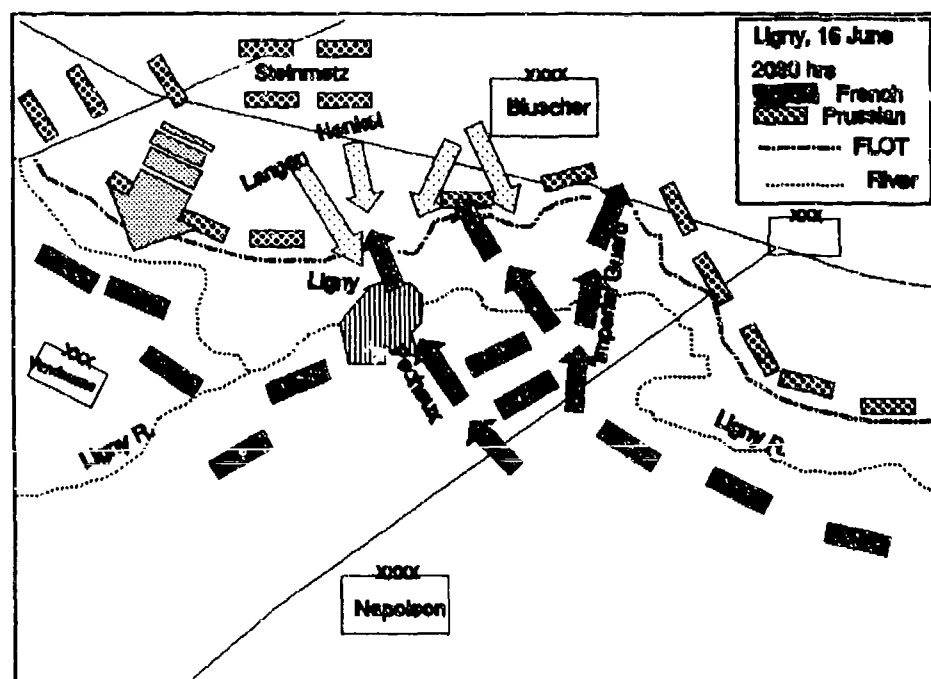


Figure 1 Breakthrough in a Mobile-type Battle, the Battle of Ligny, 16 June 1815.

Forces breaking through enemy screening formations faced an onslaught of combat units echeloned in depth. The major difficulty comes from the lack of surprise. Enemy units, aware of penetrations and already moving, can quickly set hasty defenses and mount counterattacks.

Attack of a position-type defense, however, "was the pivot of strategy and tactics."²⁸

The tactical breakthrough was the prerequisite for the operational breakthrough. It was the operational breakthrough with widening of gaps and annihilation of reinforcing reserves, however, that made operations in the open field possible again.²⁹

The evolution of *Blitzkrieg* began with infiltration, a technique perfected in the last years of World War I. Liddell Hart described the effects of an infiltration as an "expanding torrent acting on a mud bank."

Water seeps through the bank and gradually wears holes in the weak spots. The sides of the holes fall away of themselves, the stream pours through the larger holes thus created and spreads out. Some of the currents swirl backward and undercut the solid portions of the bank from the rear; soon there is no bank left.³⁰

The infiltration, once established, increased in speed and provided the conditions for the rudimentary breakthroughs attempted by the German Army initially. The next step was the attack (penetration) using armored forces.³¹ The Germans substituted the infantry in making the initial assaults as armored forces became more prevalent in the inventory. Concurrently, infiltration as a precondition of the tactical breakthrough became less important. The prerequisites for the penetration were four: adequate preparation time, concentration of force, broad fronts and echelons in depth, and surprise.³²

J.F.C. Fuller's "Theory of Penetration," explains the mechanics of a penetration.

The fundamental difficulty in an attack of penetration is continuity of advance, and is restricted more through hostile flank pressure than hostile frontal resistance. . . .³³

In fact, the force holding the shoulder of the penetration is often initially more important than the penetration force itself. The German infantry had the mission of holding the flanks while the Panzer elements sought a decisive action in the enemy rear.

In attempting a ground penetration, two kinds of force are required. One is the actual penetration force. The other attacks to open, then hold the shoulders of the penetration. Fuller theorized that the forces holding the shoulders continue to attack thus widening and actually, "rolling up the rear of the enemy on each side of it."³⁴ The penetration, the attack through and beyond the tactical depth is thus able to continue unabated. This attack, through and beyond tactical depth establishes the conditions for the transition to operational actions.

A key consideration of the penetrating force is its ultimate objective. If the tactical defense is arrayed five miles in depth, for instance, the attacker must go beyond those five miles to accomplish his mission of encircling the tactical defensive force. Should the attacker misjudge the situation and turn too early, he risks flank attacks, and even his own encirclement. Other practical considerations include the size of the maneuver area and the road network.

The penetration or breakthrough is only a tactical action. The transition to the operational realm, required two conditions.³⁵ First, the enemy defenses had to be "rolled-up" by the attacking flank force. Constant pressure was necessary not only to maintain the gap, but also to focus the enemy's attention on the more immediate threat, tactical envelopment. Secondly, the breakthrough force had to gain freedom of maneuver as quickly as possible. Once that ability to maneuver, free from enemy disturbance, is gained, the breakthrough force can transition to operational breakthrough and depth. This is the condition sought by the operational artist. However, according to German commanders, while theoretically feasible, the operational breakthrough,

had to be regarded as a difficult enterprise that promised but little success. The one who wants to break through cannot be strong enough in troops. The operational breakthrough [penetration] *is an enterprise for "rich people"*³⁶ (emphasis added).

Envelopment

Envelopment is both the desired result of the *Blitzkrieg* and the transition point to operational art. Envelopment means *physically* surrounding the enemy force to destroy it. It is important to note that envelopment, while practical on the operational scale, is not necessarily the desired result of an operational deep attack.

As a German attack progressed through the enemy's tactical depth, the pincers of the envelopment closed around the tactical defense forces. In a classic envelopment these pincers allowed no escape and caught the entire enemy force in the "bag," or *kessel*. This maneuver was the basis for most German battlefield successes since the days of Moltke. While not always tight, the bag generally captured the bulk of the enemy force.

With the advent of mechanized warfare, the Germans were presented with a dilemma. Tanks could either seal the bag, or attack further in the enemy rear, his operational depth.³⁷ The composition of the infantry forces, limited objectives and an unwillingness to allow gaps in the penetration almost invariably caused German commanders to hold penetrating forces to allow infantry forces to catch up and complete encirclement. Inevitably, this delay in the offensive allowed defending forces to regroup and reconstitute an effective defense. Then the entire cycle of penetration and envelopment had to be repeated again. This physical fact alone limited the application of *Blitzkrieg* to the tactical realm.

The effects of envelopment on the enemy while devastating, are limited to the tactical battlefield and cannot be decisive beyond that. Envelopment is effective because it not only applies strength against weakness, it creates a psychological effect that causes the enemy to forfeit the initiative. Applying strength against weakness, or creating weakness by overwhelming force, comes

from penetration. The effects of strength against weakness, and a moral strike on the enemy's confidence are the key results of penetration (if necessary) and envelopment.

Depth

Depth is the extension of combat operations in space, time and resources.³⁸ It is both a concept, as well as a physical layout of forces, and includes combat forces and their support forces.

Depth allows momentum and elasticity to develop. Momentum implies a gathering, then concentration of resources that are then applied against the enemy. It is the offensive form of depth. Elasticity, on the other hand is the defensive form of depth and suggests an ability to react to the blows of the enemy with the necessary resources and force.

Depth was also that key consideration that determined the objective of the tactical deep attack. On reaching the appropriate depth, German commanders were forced to apply *Auftragstaktik*:

The depth for the intended encirclement need only be estimated. It is, however, essential to consider where the expected crisis-of-execution will occur.³⁹

This unique concept, the crisis-of-execution point, not only influenced the depth of the penetration, it also served as the bridge to operational actions. The crisis-of-execution point, not to be confused with the Clausewitzian idea of culmination, was the transitional stage when a tactical breakthrough became an operational one. While it can be likened to the point where a penetration becomes an exploitation, it is something more. This conceptual point was a decision point that would rein in long-ranging armored forces to complete the annihilation of encircled enemy forces. The intended depth of the attack was a measure of the boldness and risk the commander was willing to assume.⁴⁰ The examples below further demonstrate this idea.

This concept of crisis-of-execution is closely related to Moltke's idea of not planning beyond the initial engagement. The key addition here is the wait until the first battle is over, not the first shot fired. As already noted, Moltke believed the "tactical results of battles are phase lines for new strategic decisions."⁴¹ Thus, the crisis-of-execution point becomes the phase line for a decision that may link that battle to the next, thereby achieving an operational effect.

Time, in *Blitzkrieg* is another important concept. As Clausewitz noted:

Time that passes is *lost to the aggressor*. Time lost is always a disadvantage that is bound in some way to weaken he who loses it.⁴²

In deep battle, time accrues to him who attacks deep, because he not only disrupts the enemy, he also reduces the time the enemy has available to pursue his own actions. Paraphrasing Clausewitz, time gained by the *Blitzkrieg* is time taken away from the opposing force. Taking this time actually accrues time to the attacker or practitioner of *Blitzkrieg*, and is thus a tremendous advantage.

* * * * *

The German Army clearly understood and applied this form of maneuver effectively. In fact, the German mastery of this form of maneuver was one of those transitory advantages that Hitler sought to exploit. The focus of the tactical battle, however, remained on envelopment. As long as the armored forces were prevented from exploiting opportunities in the enemy's rear, the effect of *Blitzkrieg* was tactical only and did not serve to further the desired operational end-state.

OPERATIONAL ART AND *BLITZKRIEG* IN PRACTICE

The newest interpretation of the term *Blitzkrieg* centers on the operational level of war and operational art. Today, an accepted meaning of opera-

tional art is the linking of tactical actions to strategic goals. The central idea of the operational art is the relationship of tactical actions to a desired end-state. An equally important concept is the linkage of tactical actions into a coherent whole that serves the aim. Proponents of the notion that *Blitzkrieg* is operational art invariably seize on the German terms *operativ* and *operation* to make this connection. For the Germans, operations meant either the movement of large tactical units (*bewegung*), or a large form of maneuver. The use of the word stems from Moltke.⁴³

The German image of operational art during the war relates the idea of campaigns (*feldzuge*) to large-scale maneuvers. After the war, General Dr. Hans Speidel proposed a definition of operations (*operation*) as,

...a subdivision of strategy, and is the command and control of the Armed Forces at the highest levels of command, realized in accordance with the tasks called for in the strategic plan, in short, command of the battle. A battle is a large engagement, or series of engagements which has decisive consequences in time, space and effect. An engagement is a "clash of arms," or combat.⁴⁴

He noted that German experience in the war made the distinction of an operational level indispensable. It is interesting to note that references to the operational level during the war, however, both in theory and practice are difficult to find. While such a finding is inconclusive, just because a military action is dubbed a campaign does not mean that operational art is being applied.

Operational art and the operational level of war are two related but distinct concepts. The operational art pertains to the creative employment of tactical actions for the purposes of strategy. This creative aspect—the flow of the tactical actions the way each piece fits into the mosaic that is a campaign—provides the art. The operational level, on the other hand, is an amorphous, culture and army specific concept that provides the institutional and hierarchical

linkage between strategy and tactics. For the American Army, for instance, the operational level can be anything from brigade to corps or larger unit. For the German Army, control of the operational level of war "rested with the higher military commanders."⁴⁵ This level extended from "the supreme commander down to the respective army commanders in chief, at times even down to corps commanders."⁴⁶ Tactics were a function of "commanders from division level down."⁴⁷ Thus, the operational level of war, for the German Army, was corps level and above.

This is not to argue that the German Army did not plan and execute operations at the operational level in the Second World War. On the contrary, records indicate the OKH and OKW continually sought the synergy derived from linking tactics and strategy with the operational level. What was often overlooked was how the nature of the art is practiced at the operational level. The theoretical characteristics described above set the conditions for the practice of *Blitzkrieg*. Lacking in the German practice is a firm understanding of how these characteristics combine to create an effect that is greater than the sum of its parts.

The Characteristics of Operational Art

Operational art, like *Blitzkrieg*, consists of various theoretical characteristics, distinguishable from the tactical concepts already addressed. These characteristics, combined with those tactical characteristics of *Blitzkrieg*, define how the OKH and the Army in general, developed the practice of the German version of operational art. These characteristics include, operational maneuver leading to distributed campaigns, continuous logistics, operational vision, and finally, the unique, German contribution to the practice of the operational art, *Blitzkrieg*.⁴⁸

Distributed Operations and Operational Maneuver

Distributed operations and operational maneuver were the most difficult operational concepts for the Germans to grasp in World War II.⁴⁹ A distributed operation is, "an ensemble of deep maneuvers and distributed battles extended in space and time but unified by a common aim."⁵⁰ Operational maneuver is the relational movement throughout the depth of the enemy that maximizes freedom of action.⁵¹ Raised in the tradition of Schlieffen, who preached the necessity of the battle of annihilation, the Germans always concentrated their force on the immediate aim.⁵² As long as they believed the decisive battle was attainable, their immediate aim was a battle of encirclement, leading to annihilation.

Operational art requires the commander to forego the immediate gratification and victory offered by a battle of encirclement. That focus led to the tactical successes already discussed, but inevitably proved the cliché of "winning the battle but losing the war." The nature of war, and consequently the actions of armies had changed from Schlieffen's time. By the start of the Second World War, armies were so large, so as to be able to mass in numerous points to threaten a force. Napoleon, in his time, dealt with these forces by "operations on interior lines."⁵³ By placing his force between other forces, or by attacking one, then the other, he could hope for victory. By adding mechanization, the Germans pursued the same classical strategic goals.

The mechanization of armies and their ever increasing size forced commanders to consider fighting a number of tactical engagements, within the framework of a larger battle. The art involved in this type of warfare is the ability to fight these engagements and link successes to the overall operational aim. Consider the situation in Figure 2. Attack A, by F1 and F2 is designed to block enemy advances from the east, and sequentially continues south in Attack

B. Concurrently, another force, F3, attacks to set the conditions, either destruction of an enemy force, or seizure or denial of a key terrain feature. Finally, Attack C, proceeds east to take or block the city, or another area that was the desired operational objective.

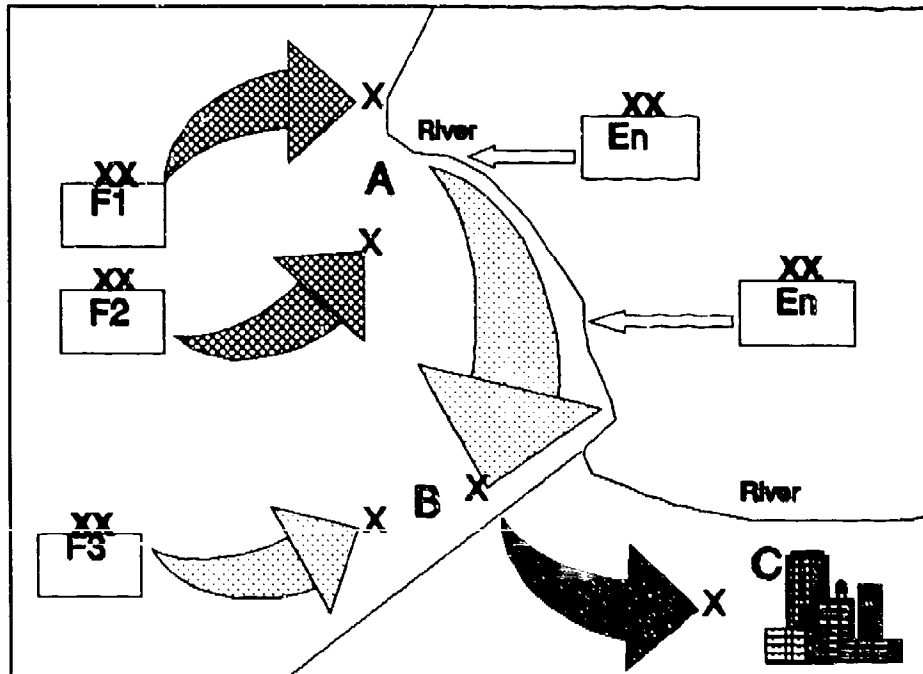


Figure 2 Distributed Maneuver

The maneuver here is at two levels. At the tactical level, in Attack A for instance, the tactical goal is to protect a turning flank, thus gaining positional advantage over the enemy. The crisis-of-execution point for these attacks are points designated "X". Each tactical application of *Blitzkrieg* results in a crisis-of-execution point, the transition to operational art. By planning for the crisis-of-execution point, the attacking force determines where, when, and at what strength the following action must be made. This is the linkage of tactical actions essential for operational art.

Seen from the operational perspective, the first attack sets the conditions to allow the following (or concurrent) attacks to proceed. The difference be-

tween the tactical and operational aim at this point is in forcing the enemy to respond to the friendly will. At the tactical level, Point A, the force maneuvered to gain positional advantage over enemy forces approaching from the east. At the operational level, maneuver is used to deny freedom of action, or seize initiative. The sequence of actions, first A, then B, then C, distributed over the battlefield forces the enemy to react either defensively or with a counterattack. The battle at the operational level is over freedom of action—ensuring one's own, and denying the enemy. At the tactical level, the enemy seeks positional advantage to restore the status quo ante. The synergy derived from this sequential and simultaneous action, tends to cause paralysis, thus denying the enemy freedom of action.

A final component of the distributed operations characteristic is continuity. Continuity is nothing more than constant, relentless pressure on the enemy force. This pressure, closely related to the notion of tempo, denies the enemy the ability to regain that freedom of action he loses after the initial attacks. Normally associated with logistics, continuity also includes the ability to plan, conceptualize, identify weak areas, and most importantly do something about them. Operational pauses, required by logistical constraints are often inevitable. However, it is rare in a theater that the entire force must be idled. Continuity recognizes the ability and necessity to keep the enemy off guard, and to maintain tempo, while covering a temporary weakness.

Continuous Logistics

Logistics is the second major characteristic of operational art. A simple idea, Napoleon made much of this important link by his comment that an army moves on its stomach. Thus, the connection of movement including the notion of offensive actions, and sustainment.

Tactical logistics involves the simple, oft repeated actions of arming, feeding, and fueling. It includes the stores a division size formation for instance, carries as its basic load. Operational logistics, on the other hand, includes the resupply of these stores, and more importantly the connection to the logistics base of the nation. For the Germans in World War II, the logistics base was Germany. The umbilical cord was the railroad system. Operational logistics is the link between the theater and the tactical unit. It provides the operational commander the freedom of action he requires to prosecute his campaign.

Operational logistics includes the movement of all the necessities of warfare from armored cars to troops and their required sustainment. Operational art requires a consideration of these facts in the plan of an operation or campaign. The German Army in 1939 and 1940, was relatively close to home and convinced of the speed of execution of *Blitzkrieg*. Thus, operational logistical considerations played no part in combat planning. Recall, however, the anecdotes related to Guderian's tanks using French gas stations for refueling.⁵⁴ Fortunately for the Germans, France was a well-developed country with a standard of living similar to that of Germany.

The Eastern Front, however, provided new challenges. Because OKH was mesmerized by the quick victories in France, logistical considerations were given scant attention. A key example is the lack of winter clothing in the winter of 1941/42. The planning of a campaign must acknowledge the requirements of logistics. German lessons learned after the war reflect this tenet of operational art. "A campaign or an operation should balance its objective with the supply requirements and possibilities (emphasis in original)."⁵⁵

A final consideration of continuous logistics in the operational art requires the operational planner to not only consider locations of Lines of Communication (LOCs), but plan for their seizure, possible reconstruction, and

future use. This was one of the hardest lessons learned by the German Army in Russia, but once learned became an important aspect of the planning process, and the campaign plan, as will be demonstrated below.

Operational Vision

Operational vision is a two-faceted concept. It requires the planner and commander to be able to visualize the course of a campaign from start to finish. This is not only a difference in scope from tactical vision, but requires an understanding of the aforementioned concepts. An integral part of this concept deals with the staff. The staff must be able to visualize not only the course of the campaign, but visualize it as the commander sees it. Tangential conceptualizations cause confusion and serve to disrupt unity of command, witness the disagreements between Hitler and the OKH. This concept tripped the German Army command structure more than once during the war.

The second aspect of vision relates to the mental acuity to understand rapidly what is happening, assimilate and decide. This is nothing more than Clausewitz' definition of genius, and relates to coup d'oeil. Coup d'oeil, literally, a glance of the eye, depends on the vision and seeks the errant aspects of execution in the campaign. Orders, decisions and reconsideration of actions flow from this notion.

The final, tactical, characteristic of German operational art was the practice of *Blitzkrieg*. The speed, and shock value of this tactical form of maneuver were essential elements in the evolution of German operational art and thinking. The following, brief case studies demonstrate these ideas.

Western Front 1940 (Fall Gelb)

Having concluded the Polish campaign on 27 September 1939, Hitler ordered the Army General Staff to begin examining the possibilities for an

offensive in the West.⁵⁶ This marked the beginning for the operations that spawned the name *Blitzkrieg*.

Before analyzing the operational aspects of the planning for the Western offensive, it is important to comment on the organization of the German Army of 1940. The operational level commanders of German forces for the 1940 offensive were the Army Group commanders, but their impact was subordinated to the *Oberbefehlshaber des Heeres*, (ObdH) (Commander-in-Chief of the Army). Thus, for all intents the highest operational level commander was Field Marshal von Brauchitsch, assisted by the Chief of the General Staff, General Halder. The campaign plan for the offensive was prepared by the Army General Staff, with input from the Army Groups.⁵⁷

The planning for the *Fall Gelb* (Western Offensive 1940) began on 29 September 1939.⁵⁸ Halder however, recognizing that the victory in Poland was perhaps too easy, considered the *Blitzkrieg*, "no recipe for the West, [and] no good against a well-knit army."⁵⁹ Hitler's guidance to the General Staff, a reflection of his acknowledgment of the German strategic defensive culmination, called for an attack on a wide, but not massive front, to:

...make it so that the French and British give battle and beat them. Only in this way can our superiority in leadership, training and materiel be applied to full advantage.⁶⁰

The strategic aim for this operation was,

To defeat the largest possible elements of the French and Allied Armies and simultaneously to gain as much territory as possible in Holland, Belgium, and Northern France as a basis for successful air and sea operations against Britain and as a broad protective zone for the Ruhr.⁶¹

According to von Manstein, the original plan (Plan I, Map A), would provide only partial victory, limited territorial gains and questionable destruction of forces, and not satisfy the strategic aim. In fact, Manstein notes that OKH

must have been inspired by Moltke's axiom, quoted above, about no plan extending beyond the first encounter. While it seems clear that the attack through France was to be the first phase of a multi-phased operation, the plan did not reflect this goal. The original plan, moreover, was a simple frontal attack that sought to push the enemy back on his own lines and,

...he might still be expected to get back beyond the lower Somme in reasonable order. Once there he could draw on powerful reserves to build up a new front. By this time the German offensive would be losing momentum, [and] would be unable, either by the disposition or strength of its forces, to prevent the enemy from forming a defensive front....⁶²

Manstein, proposed the well known change, based on three considerations. (See Map B.) First, he believed the aim of the offensive needed to "force an issue by land."⁶³ He had already noted there was no sequel planned, and therefore proposed to use the offensive capacity of German Army as its "trump card," to drive to the coast. In operational terms, Manstein's idea of a military end-state included not only the destruction of the enemy force, but posturing the force to continue the offensive, not only to France, but also England. In this case the turn South to defeat other French forces, or being poised to strike at England in accordance with the strategic aim used an initial idea of distributed operations.⁶⁴

The second consideration centered on the inability of German planners to do nothing more than rehash old plans (Schlieffen Plan). Manstein saw the opportunity to use surprise, in accordance with the potential *Blitzkrieg* tactics had to offer, to effect a decisive initial tactical victory. This would create a favorable operational situation that could set the conditions to launch subsequent operations.⁶⁵

Finally, Manstein recognized that a rehash of the Schlieffen Plan would only result in

the Anglo-French elements we expected to meet in Belgium [to] be floored by a powerful straight right while our (weaker) left fist covered up.⁶⁶

Thus, to prevent the enemy from forming a solid defensive line while falling back on his own lines of operation, it was necessary to smash enemy concentrations on our southern flank.⁶⁷ The fear of repeating a World War I experience drove this embryonic operational thinking of the German Army to develop ways to use maneuver to both tactical and operational advantage.

The intrigue and controversy concerning the selection of Plan I versus Plan II have been discussed in detail elsewhere. It is important to note here that Halder's main concern was,

the difficulty of advancing through the Ardennes to the Rhine River a battle corps not only mechanized, but echeloned in depth.⁶⁸

Because of these difficulties, Halder, in the tradition of Moltke, insisted he could not forecast, "beyond the initial engagement."⁶⁹ The experiences of the Polish campaigns notwithstanding, Halder could not accurately predict the capabilities of German motorized troops, until now only tried in Poland. In any case, he,

... wanted to hasten to the Albert Canal and the Meuse River, insure the crossings and secure enough bridgeheads for the most favorable developments of his maneuver. [In] the event the Panzer should fail, [he] wanted to be able to equip as soon as possible, but as methodically as the situation required, a powerful attack based upon infantry and artillery.⁷⁰

The most important aspect of the plan was his insistence, again in the tradition of Moltke that he "could not then establish firmly, the scheme of the push beyond the Meuse River."⁷¹ The combination of terrain (the Meuse) and untried troops contributed to the crisis-of-execution point in the *Fall Gelb*, the Meuse River.

It is at this point, the crisis-of-execution point, that the transition between tactical and operational maneuver occurs. The original plan called for a quick advance by armor to the Meuse. At the Meuse, the infantry was to have been called forward to bridge the river, and ultimately, clear the bridgehead. Afterward, in concert, the armor and infantry elements would affect the entrapment of the Allied Armies.

Unfortunately, a problem that would plague the German Army throughout the war, the differences in tempo between motorized and marching troops, came to the fore. This difference led to the opening of gaps, opportunities for the enemy to surround and destroy advancing troops from the flank. These gaps, combined with a fear of disaster caused Hitler, through OKH to order the halts that eventually prevented this offensive from encircling and destroying not only the French Army, but also the British.

Guderian, in a display of initiative, as well as faith in his armor troops pressed to move on. The theatrics and recriminations involved are well known. It is essential to remember that *Blitzkrieg*, as it had been developed in the German Army, depended upon seizing the initiative. Guderian, realizing the crisis-of-execution point had been reached, felt it necessary to insist on action as opposed to waiting: offense as opposed to defense. His actions provided the linkage of the breakthrough tactics to Hitler's strategy. The immediate and lasting effect of his action was the maintenance of freedom of action. Historians will argue whether Halder and the General Staff planned the attack as an operation, or as a tactical encirclement. It is clear, however, that operational thinking had started in the German Army.

The Meuse was the crisis-of-execution point in this first phase of the Campaign for France. It provided, in accordance with Halder's intent an operational decision point. Since the German Army invariably planned according to

Moltke, such a decision point was essential. It took Guderian, however, in a display of Clausewitzian genius to see the possibilities for further operations. The Meuse was only the first phase because of the higher commands uncertainty of the applicability and efficacy of armor and motorized troops. Seizing the opportunity, however, provided that operational effect of paralysis, essential to the absolute defeat of an enemy.

The success of *Fall Gelb*, colored operational thinking for the rest of the war, from Hitler, who "had a certain instinct for operational problems, but lacked the thorough training [which] enables a [commander] to accept considerable risk in an operation because he knows he can master [it]," to the General Staff.⁷² In fact, the plans for the Eastern Front took all the lessons, good and bad, of the Western campaign and applied them to the East. Unfortunately, different terrain and space, a much more determined enemy, faulty intelligence and an unflinching belief in the superiority of German techniques led to German disaster. The Germans, however, had linked the *Blitzkrieg* successes to develop their own version of an operational art, a first step in its evolution.

The Eastern Front

Planning for the war in the East started almost immediately. *Blitzkrieg* would be used again to,

...defeat Soviet Russia in a quick campaign even before the end of the war against England. The operations should be so conducted that the mass of the Russian Army in Western Russia will be destroyed by deep armoured thrusts.⁷³

Unfortunately, the detail, and candor used to develop the campaign in France were sorely lacking. The successes in the West led the entire military and political to believe it could,

annihilate the bulk of the Soviet Army in the Western parts of Russia by a series of bold drives and to prevent their withdrawal into Russian space.⁷⁴

In another example of the impact of Moltke on the German planning process, the objective for Operation Barbarossa was deliberately left vague. In fact,

You will note the absence of any plans for the period after gaining the Dnieper-Leningrad line. One could explain this with the old strategic principle that you can't plan for any period later than the first decisive encounter with the enemy.⁷⁵

Much like the Meuse River in France, The Dnieper-Leningrad line became the crisis-of-execution point. Here all operational planning terminated. Further operations depended on the success or failure of the tactical actions to this point.

Campaign planning requires clear, unambiguous strategic goals, an adequate appreciation of enemy capabilities, and a real appreciation of friendly capabilities. In this case, the realization of the strategic goal depended on perceived requirements and success. In fact, the stated goal of overthrow of the Bolsheviks by military means countered the conventional wisdom.⁷⁶ Perhaps the German's greatest mistake was in believing the Russians could be defeated in one campaign. That belief negated proper use of the operational art.

The offensive actions pursued on the Eastern Front in 1941 were based on the successes of 1940. The *Blitzkrieg* tactics of encirclement were executed with precision, and usually success. Unfortunately, a lack of solidarity at the operational level, and the tempo problem of infantry and armor already noted served to temper these achievements.

A major problem was the inability to agree at the operational level on aims and missions. Disagreements on aims centered on perspectives. Hitler's aims were based on political and economic considerations:

These were the capture of Leningrad (a city he regarded as the cradle of Bolshevism), by which he proposed to join up with the Finns and dominate the Baltic, and possession of the raw material regions of the

Ukraine, the armament centers of the Donetsk Basin, and later the Caucasus oilfields.⁷⁷

OKH and the Army were not convinced. They would capture these political and economic goals by defeating the Red Army. To defeat the Red Army, it had to be found. The OKH believed that the Red Army would defend Moscow, therefore a drive on Moscow would set the conditions for the strategic aims of the government. This disagreement, which was never resolved throughout the course of the war, was one of many reasons for failure on the Eastern Front.⁷⁸ This difference in opinion led to a difference in focus. Hitler concentrated on the flanks, North and South, and OKH concentrated on the middle, the road to Moscow.⁷⁹

The early phases of the Russian campaign, while impressive in success, did little to break the spirit of the Russian defenders, nor did it have an operational effect on the course of the war. In fact these victories, although immense in scale of captured and wounded Russian soldiers, were only tactical victories—*Blitzkrieg* victories. The lack of strategic harmony, combined with an unclear appreciation of the operational art, prevented linking these tactical victories into a coherent operational and, thus, strategic triumph.

Fall Blau

Fall Blau, the Summer Offensive of 1942, was Hitler's attempt to solve the serious problems resulting from the broad offensive of 1941. By November 1941, it was clear that the short, decisive campaign envisioned in May and June had failed. Realizing he did not have the resources to launch a general offensive, Hitler decided on the Army Group South area as the main effort for an attack in the Spring of 1942.

Field Marshall von Bock, Commander-in-Chief, Army Group South, furnished Hitler with a "memorandum on the probable situation in the Spring

and the conduct of an offensive," in early 1942.⁸⁰ Ziemke suggests this memorandum influenced "Directive 41," (the implementing order from Hitler).⁸¹ In fact, the similarities between the plan executed and the Army Group South proposal, especially regards phasing, are remarkable. It is this Army Group South plan, detailed below, which suggests the German Army had come to recognize operational art.

Hitler's strategic aim lay in the oilfields of the Caucasus, an aim that remained unchanged from the beginning of *Barbarossa*. Now, however, he was willing to concentrate all resources on the southern flank, making it the German center of gravity.⁸² The stated operational aim (*Ziel*) was, "to force a penetration in the Caucasus region."⁸³ Specific operational goals for Army Group South were, to destroy enemy forces forward of the Don and to gain possession of the passes into the Caucasus and the Caucasus itself.⁸⁴

The strategic atmosphere of the Winter of 1941/42, was colored by the severe logistics problems facing the *Ostheer*. "The German Army, in 1942, was incapable of long ranging objectives."⁸⁵ These realizations forced the OKH to discard simultaneous operations, and concentrate instead on a series of sequenced actions, each a *Blitzkrieg* action of encirclement in itself. In short, the German Army was being forced to consider, explicitly, the application of the operational art. *Blitzkrieg* would still be the tactical tool, and encirclements the desired tactical result, but in Army Group South at least, planners were looking past the immediate gratification of large encirclements to the integration of successive operations into a mosaic structure to meet the operational aim. Implicit in this new approach was the maintenance of freedom of action through operational maneuver and distributed operations.

The phasing aspect, this linking of actions, forced planners to look beyond the crisis-of-execution point, and propose and develop fundamental

answers. This thinking represents a revolution in the way Germans considered operations. Instead of opting for *ad hoc* execution in the tradition of Moltke, a complete plan was formulated which sought to set the conditions for a series of tactical actions leading to operational art.

The Army Group South plan approached the requirements from both a strategic, and operational perspective. At the strategic level, the main concern centered on the ability of the German nation to reconstitute, resupply and transport forces from the rear to the theater.⁸⁵ The focus of this concern was the order, by Hitler, to shift resources from Army requirements to those of the Air Force and Navy after the initial successes of 1941.

An appreciation of the operational perspective started at the theater level with an analysis of the terrain, (see Map C). The Don River was the major terrain feature between the Army Group South and the Caucasus. "Any advance to the lower Don River required secure flank protection to East and North."⁸⁷ The southward turn of the German Armies to both destroy Soviet forces before them, and to cross the Don in the south required a secure eastern flank. In fact, the Don would serve to strengthen that flank. Stalingrad, at the entrance to the Caucasus, was the key to the Caucasus region, the strategic objective. The best cover for the drive Southeast was the isolation and blocking of the Stalingrad area by cutting the North-South links from Yelets to Valuiki and from Michurinsk down to Swoboda.⁸⁸

A second, major operational consideration was the line of communication (LOC) for the operation. This consideration, probably more than any other, was the key to operational understanding in the German Army. Logistics, both strategic production and stockpiles, and operational availability had, until this point been the weakest link in the German operational thinking. Shortages in major end-items, (tanks and trucks), as well as more basic supplies as ammuni-

tion and cold-weather gear, plagued the Army throughout late 1941. Part of the problem lay in the aforementioned priority shift of late 1941, thus the strategic level. The other half of the problem was the line of communication issue. Simply stated, the German Army ignored its rear and concentrated only on the front. There are several reasons for this failing, including the fact that special non-military units were operating between the homeland and the actual location of the Army. Politically astute commanders quickly learned to ignore their LOCs. The operational impact of such ignorance, however, proved devastating. Not only partisan problems, but actual physical roads and railroad lines became operational issues for the Army Groups in the Eastern Theater.

The Army Group South plan addressed this problem by specifically planning for the seizure of the North-South rail line Kharkov-Lisichansk-Artemovsk, and the almost parallel, Kharkov-Valuiki-Starobelsk line.⁸⁹ In fact, Army Group South considered the establishment of the LOCs a precondition for furthering the attack. These rail lines would follow the progress of the Phase One attack, set the conditions for Phase Two, and ultimately resource the final attack southeast into the Caucasus region. Included in the plan was the requirement to establish "stockpiles of necessary supplies, at the railheads."⁹⁰

Phase One of the Army Group South plan called for an attack east, between Izyum and Oboyan with the orienting objectives of Voronezh in the North, and Pavlovsk in the South. Voronezh and Pavlovsk lie on the Don River. The operational intent was not to seize crossing sites for the river was to serve as protection. While setting these blocking and covering positions oriented to the east, on the Northern Don, *schnelle Verbände* (fast formations, the motorized and armored units) would turn southeast. Assisted by a supporting attack from Artemovsk northeast to Starobelsk, the line Starobelsk-Novaya Kalitva would be set, ending Phase One.

The precondition for the beginning of Phase Two was the seizure and *placing into service*, of the rail lines with appropriate stockage levels, and would require an operational pause.⁹¹ This operational pause was necessary to refit an Army suffering from lack of the essentials that were not delivered by the start of the exercise. Additionally, fuel and ammunition concerns would manifest themselves at this point of the operation. The Army Group South planners thought this first phase line the crisis-of-execution point for this operation, already indication of new thinking.

Phase Two was to proceed with an attack south to Shakhty, a north-south, east west, rail hub. This attack sought the crossing sites on the lower Don. Simultaneously, the armored forces would conduct *Blitzkrieg* actions to encircle and destroy enemy forces in Donetsk-Don bend area. The result of these two phases, mainly the blocks to the East, would set the conditions for Phase Three. Phase Three was the crossing of the lower Don and continued attack to the Southeast. It would end when the strategic conditions of seizing the Caucasus passes had been accomplished.

Before comparing the Western operations of 1940 with the Army Group South plan of 1942, some comments on Directive 41, Hitler's plan, are in order. While the plan was similar, it lacked in those areas which distinguish operational art from tactical craft. Consider the following:

Hitler's plan stated, in part:

The entire operation begins with a breakthrough in the vicinity of Orel proceeding south towards Voronesh. Of the two, attacking pincer forces of motorized and armored troops, the northern attack will be stronger than the southern. The objective of this breakthrough is the seizure of Voronesh.⁹²

In the Army Group South plan, Voronesh was not an operational objective, much less a tactical one. Since, the Army Group South plan did not

require crossings over the northern Don there was no reason to enter the city. Hitler's order further notes, "Every attempt must be made to reach Stalingrad, or at least bring it into range of our heavy artillery, so that its usefulness as an arms production and transportation and communications center would be denied."⁹³ The Army Group South plan recognized Stalingrad for what it was, a transportation hub which needed to be blocked. Obviously the focus of the operation was diluted when such intermediate objectives that have nothing to do with the strategic aim, were interjected. More so when these intermediate objectives are urban environments that require the tremendous expenditure of time and effort to control.

The lack of guidance, or even orientation, concerning the logistics aspect is rather curious. The Army Group South plan incorporated logistics throughout, planning even operational pauses while railheads and stocks were built. Hitler's attempt at operational art ignored what some consider the essence of operational art: logistics.

Finally, the Hitler plan was the proverbial "bridge too far." German forces were weak. The requirements of his plan, however, called for seizure of the cities, and the occupation of the Caucasus. The message to field commanders was business as usual. This message could only result in a dispersal of force, instead of a concentration of force to meet the strategic aim.

* * * * *

In summary, comparison and contrast of the 1940 and 1941 operations and the 1942 Army Group South plan, in light of the criteria listed for the conduct of the operational art, reveal the development of operational thinking in German Army. Applying the criteria presented above, Table 1 represents the evolution of operational thinking in the German Army.

Table 1

*** ⁹⁴	Maneuver*	Logistics*	Vision*	Continuity*	Linkage*
1940	No	No	No	Maybe	Yes
1942	Yes	Yes	Yes	Yes	Yes

Operational maneuver, logistics and vision represent the main areas of change. The shift in thinking from encirclement and *Vernichtungskrieg*, to actions designed to provide freedom of maneuver and action are striking. Equally important were the inclusion of operational logistics considerations in the maneuver planning process. The change in operational vision reflects the requirements to look beyond the first battle. Thus, at least the *thinking* of Army Group South in their plan for the Summer offensive, reflects what we now call operational art.

CONCLUSION

Blitzkrieg was the tactical means the Germans used to pursue their strategy in World War II. Applied against an enemy that was temporarily inferior in doctrine and technology, it was a great success and led to the aura which surrounds the word. The Germans never wavered from *Blitzkrieg* tactics during the war. Offensives, including the Ardennes offensive in 1944, used *Blitzkrieg* to seek that transition, the crisis-of-execution point, where the action approached operational dimensions, but only seldom operational art.⁹⁵

Blitzkrieg was also the tactical innovation that allowed the German Army to sense the possibilities of an application of operational art. It became, in fact, the bridge from the tactical to the operational level. It contributed to the German version of operational art. It was not, however an expression of operational art, in and of itself. *Blitzkrieg* set the conditions to transition to the opera-

tional realm, but these opportunities were only seldom seized. The German Army, however, in a natural evolution of operational thought and practice, seems to have understood the importance and place of operational art. Unfortunately that understanding did not permeate the General Staff nor the Army. Conflicts with Hitler's strategy aside, relatively few German officers, especially those at OKH, really understood the distinction between tactics and operational art.

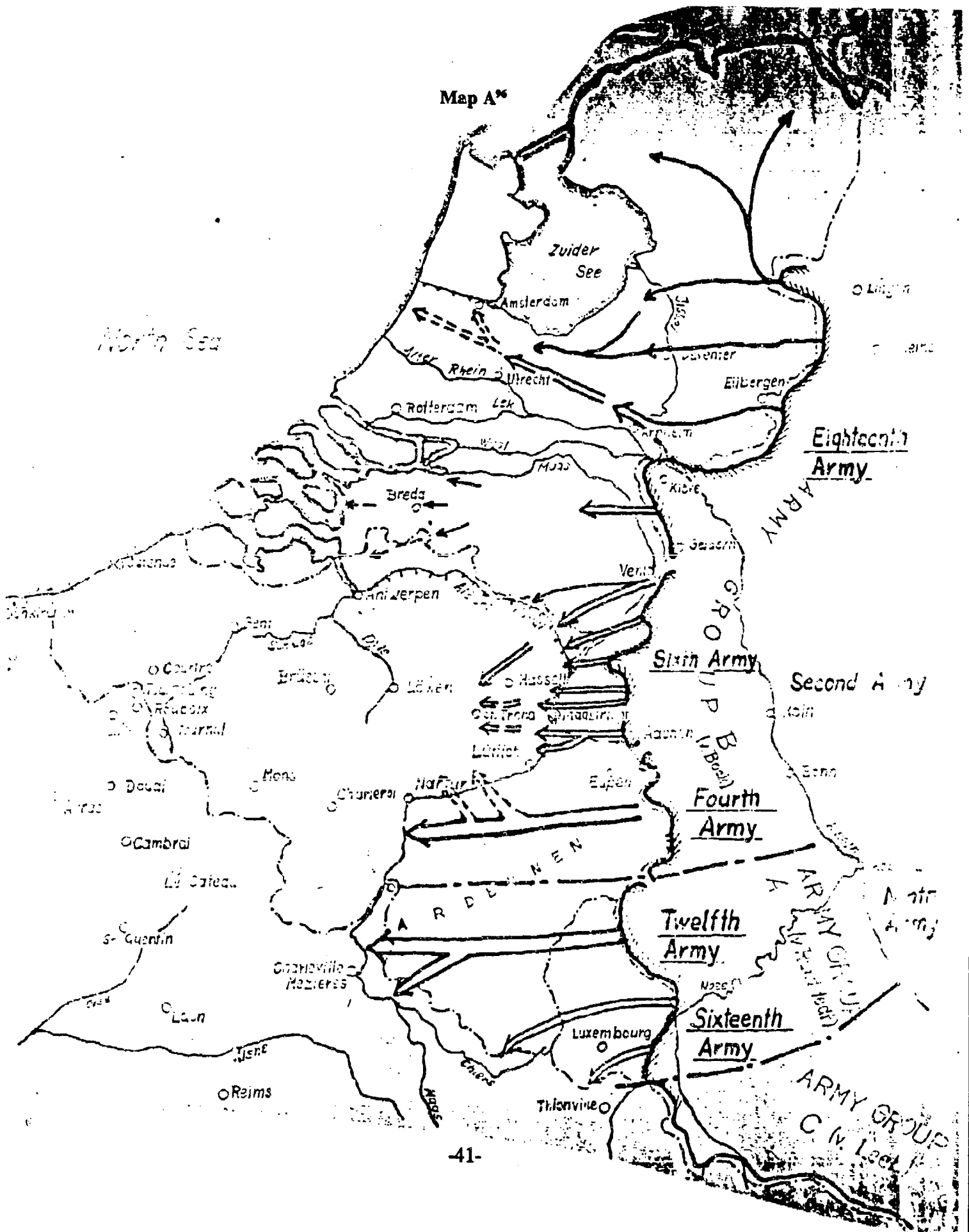
In 1940, the German Army unsure of itself and its capabilities attacked west with an untried tactical doctrine. The pieces of the mosaic that would become German operational art were present, but not recognized for what they were. Distributed maneuver, a hallmark of operational art was evident in the plan, but not in the execution. It took a commander on the ground, Guderian, to recognize a possibility offered by the technological edge Germany had honed. The ghost of Moltke, and the ingrained practice of not looking past the first battle, forced the Germans to their crisis-of-execution point. The other characteristics of operational art were also lacking but one. By chance, the results of one tactical action, in this case a breakthrough, were linked to the rest of the campaign. This all important linkage was mistaken for the synergy that is operational art and lessons were paid on the Eastern front.

By 1942, at least for the Army Group South Plan for *Fall Blau*, things are already different. It appears that the space, terrain, enemy and distance from Germany forced tactical level commanders to re-look their methodology for waging campaigns. This is also, in a sense, evidence of a "mini-revolution" in German doctrine, for the overriding necessity of the encirclement faded. Encirclements would be accomplished where possible, but the focus of effort was on taking the necessary steps to seize the initiative and force the enemy to respond to their will, thus, operational maneuver. Logistics, the bane of modern

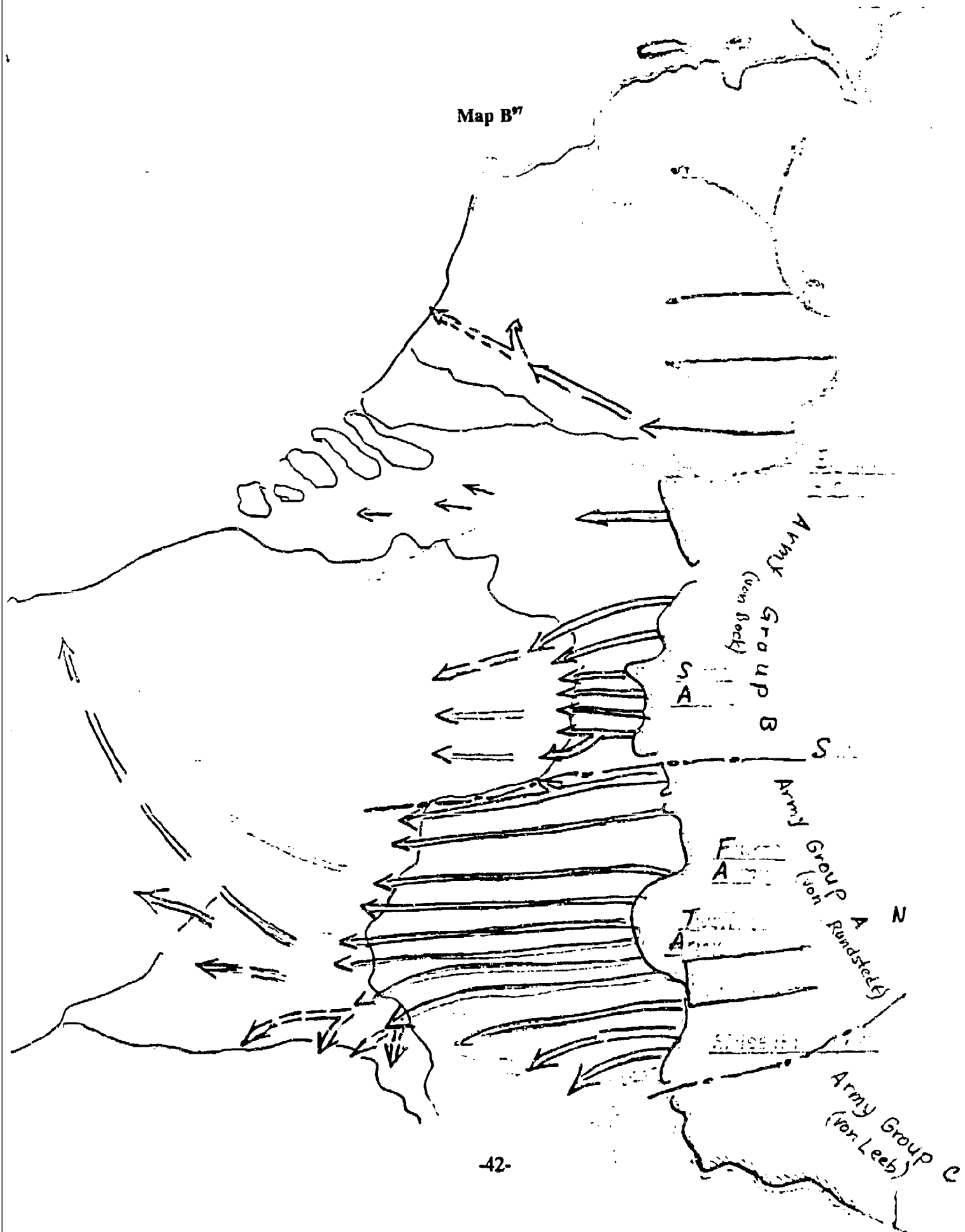
warfare, is not an afterthought, but became an integral part of the operational planning process. A vision for the execution of the operation does not repeat the OKH party-line, but seeks to foresee how the entire campaign, from start to finish will be accomplished. Finally, the entire process is marked by a sense of continuity. The idea that one battle, that one action will decide the war is gone. The Germans accepted finally that modern warfare was beyond the era of decisive battle and must be waged, one step at a time.

The result of the German inability to properly exploit *Blitzkrieg*, the tool that was their key to the operational art, is history. Although an excellent tactical tool, bordering on the operational art, it was only one small tile in the mosaic of a campaign. The mosaic of the German practice of operational art was marked by pieces of tile—*Blitzkrieg*, that never became a whole.

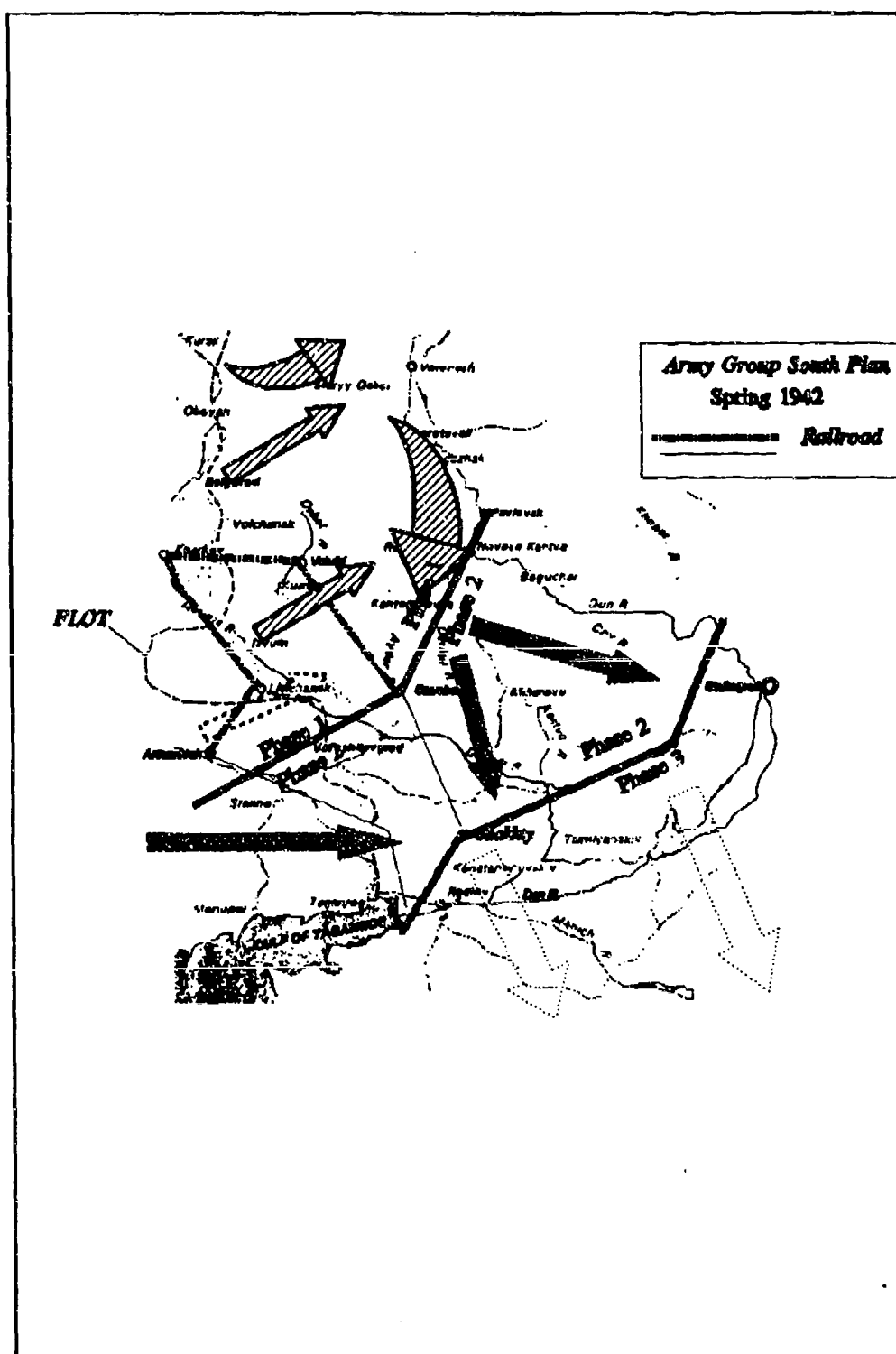
Map A³⁶



Map B⁷



Map C



NOTES

1. Barry Leach, German Strategy Against Russia, (Oxford, UK, Oxford University Press, 1973), 13.
2. This definition is a synthesis of the literature on the subject of *Blitzkrieg*. Key references include: General der Panzertruppe Erich Brandenberger, German General Staff (Vol. XXX, MS P-031A, Combined Arms Research Library, (CARL) Ft. Leavenworth, KS Archives) and General der Infanterie Edgar Röhricht, Große Einkesselungsschlachten im 2. Weltkrieg, (MS P-209, CARL Archives).
3. Generalleutnant Dr. Hans Speidel, Training and Development of German General Staff Officers, (Project #6, MS P-031A, 1949, CARL Archives.)
4. Speidel, 4.
5. General Wetzell, A Study of War Plans and the Realities of War, translated by E.F. Koenig, (*Studie über Operationspläne und Kriegswirklichkeit, Militär Wochenblatt, 11 October 1936.*)
6. Moltke as Quoted in Wetzell, Study, (emphasis added).
7. Gordon A. Craig, The Politics of the Prussian Army, 1640-1945, (Oxford: Oxford University Press, 1955), 277.
8. Speidel, 5.
9. Brandenberger, 111.
10. Brandenberger, 111.
11. See Jehuda Wallach, The Dogma of the Battle of Annihilation, (Westport, CT: Greenwood Press, 1986), for a excellent discussion on the German search for decisive battle.
12. See Jehuda Wallach, The Dogma of the Battle of Annihilation, (Westport, CT: Greenwood Press, 1986); and LTC C.A. Edson, "German Tactics in Russia," in C&GS Military Review, (Vol XXII, No.84), for a complete discussion of the background of German encirclement doctrine.
13. General der Infanterie Edgar Röhricht, Grosse Einkesselungsschlachten im 2. Weltkrieg, (CARL Archives, MS P-209), *Der frontale Angriff drängt den Gegner auf seine Verbindungen zurück, er tut ihm Abbruch, aber schaltet ihn nicht aus. Die mit ausreichenden Kräften durchgeführte Umfassung aber führt zu*

seiner Vernichtung, besonders wenn sie sich zum Angriff gegen Flanke und Rücken entwickelt. xi.

14. Röhricht, xii.

15. See, Tactical Deep Battle: The Missing Link, an unpublished manuscript, by the author, for a discussion, as well as development of a definition for tactical deep battle.

16. Penetration is only necessary when the ability to outflank an enemy is lost. This was the case in World War I and the Germans, while anticipating a different war based on mechanization could not be sure the same sort of stalemate would ensue.

17. Charles L. Crow, "Tactical and Operational Depth," (SAMS Monograph, School of Advanced Military Studies, Ft. Leavenworth, KS: USACGSC, May 1986), 2.

18. Mikhail Tukhachevskiy, New Problems in Modern Warfare, (Ft. Leavenworth, KS: USACGSC, School of Advanced Military Studies, 1990,) 12, and Brandenberger, 101.

19. Röhricht, 286.

20. Röhricht, 286.

21. Ibid.

22. Hitler, as quoted in Wallach, The Dogma of the Battle of Annihilation, 290.

23. Ibid.

24. Richard A. Simpkin, Deep Battle, (London: Brassey's Publishers, 1987), 54.

25. Brandenberger, 120.

26. Brandenberger, 121.

27. Brandenberger, 125.

28. Brandenberger, 122.

29. Brandenberger, 122.

30. Captain B.H. Liddell Hart as quoted in Major W.R. Young, "Attack In Depth," RUSI Journal, November, 1942, 303.
31. Ibid.
32. Brandenberger, 123.
33. J.F.C. Fuller, Armored Warfare, An Annotated Edition of Lectures on FSR I.I.I., (Ft. Leavenworth, KS, School of Advanced Military Studies, 1990).
34. Fuller, 184.
35. Brandenberger, 124.
36. Brandenberger, 124.
37. Operational depth is "that area beyond tactical depth in which both the attacker and defender can achieve freedom of maneuver, and if gained by the attacker provides the opportunity to destroy or disrupt the defender without engaging the majority of the defenses," Charles L. Crow, "Tactical and Operational Depth," (SAMS Monograph, School of Advanced Military Studies, Ft. Leavenworth, KS: USACGSC, May, 1986), 2.
38. US Army Field Manual (FM) 100-5, 16.
39. Röhricht, *Der Raum für die beabsichtigte rückwärtige Begrenzung des Kessels braucht zunächst nur im grossen ins Auge gefaßt zu werden. Es ist aber notwendig sich rechtzeitig darüber Gedanken zu machen, wo ungefähr die 'Krisis der Ausführung' zu erwarten ist.* 287.
40. Röhricht, 287.
41. Moltke as Quoted in Wetzell, Study, (emphasis added).
42. Carl von Clausewitz, On War, edited and translated by Michael Howard and Peter Paret, (Princeton: Princeton University Press, 1976), 383.
43. Certain German Military Terms, (MS C-044, CARL Archives).
44. General Dr. Hans Speidel, in Ludwig Beck, Studien, edited by Hans Speidel, (Stuttgart: Köhler Verlag, 1955) 67.
45. Certain German Military Terms, MS C-044, (CARL Archives).
46. Ibid.
47. Ibid.

48. For a complete theoretical discussion of these characteristics see, James J. Schneider, Vulcan's Anvil: The American Civil war and the Emergence of Operational Art, an unpublished paper, (Ft. Leavenworth: School of Advanced Military Studies, 16 June 1991.) I have slightly modified these characteristics to better explain the emergence of German operational thinking and art.

49. Distributed maneuver is a concept proposed by Schneider, in Vulcan's Anvil.

50. Schneider, 39.

51. Schneider, 34.

52. See Wallach, The Dogma of the Battle of Annihilation, for an excellent discussion of Schlieffen's impact on German military thought.

53. Brandenberger, 121.

54. See, for instance the Time-Life series on World War II, showing German tanks refueling at French gas stations.

55. General Anton Bechtolsheim, German Strategy Against the Soviet Union, (MS L-001, Combined Arms Research Library, (CARL)), 40.

56. The main source for this section is the *Kriegstagebuch* (War Diary) of General Franz Halder, Chief of the German General Staff. Examination of the diary reveals the extent the Army headquarters was involved in the planning of the Western Offensive. In keeping with traditions established by Moltke, and continued by Schlieffen, the Army General Staff provided not only administrative support for operations, but developed the campaign plan. Thus Halder not only administered the Army much as the Chief of Staff of the US Army does on a daily basis, he also was the chief operational planner for the nation.

57. While the Army Groups were obviously planning offensive operations, the Army level staff was the only staff in communication with and capable of operational planning. Operational (or campaign) planning requires access to strategic level information and directives. After the compromise of information on *Fall Gelb*, on 10 January 1940, strategic level access (Hitler) was extremely curtailed. (KTB, Halder, 17 January 1940, 29.)

58. General Franz Halder, *Kriegstagebuch* (KTB), 29 September 1939.

59. Halder, KTB, 29 September 1939.

60. Halder, KTB, 10 October 1939.
61. Paragraph 1 of the OKH Operation Order, 19 October 1939, General Intention, Erich von Manstein, Lost Victories, (Novato, CA: Presidio Press, 1982), 97.
62. Manstein, 101.
63. Manstein, 103.
64. Manstein, 103.
65. Manstein, 104.
66. Manstein, 98.
67. Manstein, 104.
68. General Franz Halder, The French and Russian Campaigns—8 Questions, interrogation of General Halder at the Neustadt Enclosure, 25 October 1947, (CARL Archives, MS B-802).
69. Halder 8 Questions, 6.
70. Ibid.
71. Halder, 8 Questions, 7.
72. Manstein, 125.
73. Paragraph 1, OKH Deployment Directive of 31.1.41, Barbarossa, in Leach, German Strategy Against Russia, 263.
74. Bechtolsheim, 12.
75. Bechtolsheim, 12.
76. German theorists from Clausewitz through Goltz to Beck warned against false hopes in a Russian Campaign. In fact, Goltz, in 1900 indicated that any campaign in Russia would require phasing because of the distances and sheer immensity of the force to be defeated.
77. Manstein, 177.
78. Ibid.

79. Consider the following entry from Halder's diary, 6 August 1941, (46th day of the Russian offensive): Führer conference at HQ Army Gp South: *Following my request, CINC AGp. South raises also points of the great strategy and emphasizes the importance of Moscow. The Führer again showed himself absolutely deaf to these arguments. He still harps on his old themes:*

1. Leningrad, with Hoth brought into the picture, and,
2. Eastern Ukraine. Here Guderian will be brought in; Gomel and Korosten must be liquidated.
3. Moscow comes last.

Further dispute of the strategic objectives came the following day (7 August 1941), when Halder spoke with General Jodl of OKW. See Halder, KTB, 7 August 1941, 25.

80. Earl F. Ziemke, and Magna E. Bauer, Moscow to Stalingrad: Decision in the East, (Washington, D.C.: US Government Printing Office, 1985), 286. There is a question as to whether this memorandum was requested or not. Ziemke refers to a diary entry by Field Marshall Bock. The text of MS P-114 c reads, *Es schaltete sich daher vorausschauend und unaufgefordert durch eine Denkschrift vom 19.2.42 an das OKH.* (...Thus, Army Group South intervened with an anticipative memorandum to OKH, of the 19th of April 1942, which was unbidden, and spontaneous, and which presented these considerations.) It seems as if Army Group South was trying to "weigh in", rather than allowing typical OKH staff actions to run their course. Such a finding suggests that operational thinking developed at the tactical level and worked its way up. Thus Halder, instead of an operational planner and thinker, becomes a bureaucratic filter for field commanders to the operational by this time, Hitler, commander at OKH.

81. Earl F. Ziemke, and Magna E. Bauer, Moscow to Stalingrad: Decision in the East, (Washington, D.C.: US Government Printing Office, 1985), 287.

82. In this case, the Caucasus was the main effort.

83. *Der Führer un Oberste Befehlshaber, OKW/ WE S t Nr. 55616/42, Weisung 41, "...auf dem Südflügel der Heeresfront aber den Durchbruch in den Kaukasus-Raum zu Erzwingen.*

84. Ibid, *Daher sind zunächst alle greifbaren Kräfte zu der Hauptoperation im Südabschnitt zu vereinigen mit dem Ziel, den Feind vorwärts des Don zu vernichten, um sodann die Ölgebiete im kaukasischen Raum und den Übergang über den Kaukasus selbst zu gewinnen.*

85. Der Oberbefehlshaber der Heeres Gruppe Süd, Fortführung der Operation im Sommer 1942. Der Feldzug der Heeresgruppe Süd im Winter 1941/42 und die Sommeroffensive 1942, (MS P-114c, pt.III, CARL Archives), 85.

86. Ibid.

87. MS P-114c, 87.

88. Ibid.

89. MS P-114c, 87.

90. Ibid.

91. MS P-114c, 87.

92. Directive 41. *Die Einleitung der Gesamtoperation hat mit einem umfassenden Angriff bzw. Durchbruch aus dem Raum südlich Orel in Richtung auf Woronesch zu beginnen. Von den beiden zur Umklammerung angesetzten Panzer und mot. Verbänden hat der nördliche stärker zu sein als der südliche. Das Ziel dieses durchbruches ist die Besetzung von Woronesch selbst.*

93. Directive 41, *Auf jedem Fall muss versucht werden, Stalingrad selbst zu erreichen oder es zumindest so unter die Wirkung unserer schweren Waffen zu bringen, daß es als weiteres Rüstungs und Verkehrszentrum ausfällt.*

94. Criteria for this table are those described in the section on operational characteristics.

95. Brandenberger, 126.

96. From Operational Planning for the Western Front, (CARL Archives: MS B-801), Appendix.

97. Ibid.