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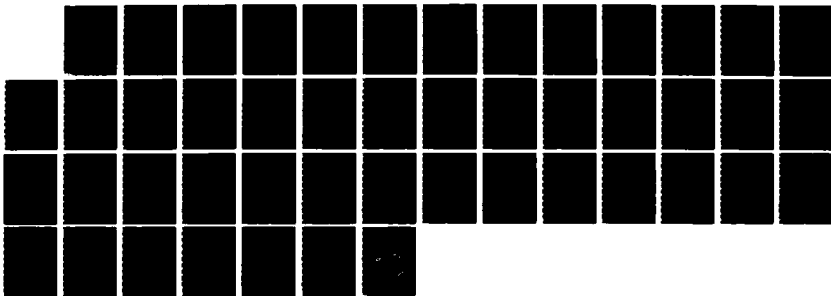
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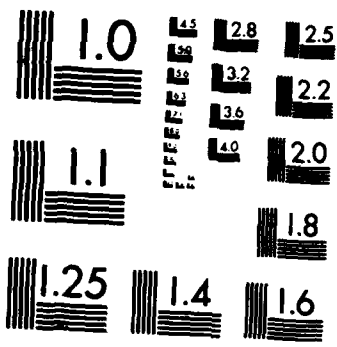
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Shutting the Door:

U.S. Army Doctrine  
for Encirclement/Envelopment Operations  
at the Operational Level of War

by

Major Robert J. Curran  
Air Defense

School of Advanced Military Studies  
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## ABSTRACT

SHUTTING THE DOOR: U.S. Army Doctrine for Encirclement/  
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Major Robert J. Curran, USA, 39 pages.

This study is an historical analysis of how encirclement and envelopment operations are important to current U.S. Army doctrine as professed in FM 100-5, Operations. The basic tenets of AirLand Battle, how doctrine is a guide for commonality within the armed services, and five World War II and School of Advanced Military Studies NATOEX operations are looked at to discover possible lessons learned and their applicability for inclusion in current doctrine and for use by current commanders.

Among the many conclusions which were drawn from this investigation are: coalition warfare, unless greatly rehearsed, will serve as a detriment to the successful conduct of an encirclement operation; lack of unity of command over the operation, unless created from the onset of the operation will result in less than the desired results because of the respective commanders' concern with their areas of operations and not the big picture; planning considerations must include size and composition of attacking force, use of artillery, reserves, and combat service support at a minimum; and finally educational preparation of the commanders and staffs on the procedures for conducting an encirclement is needed to insure a cogent plan and operation.

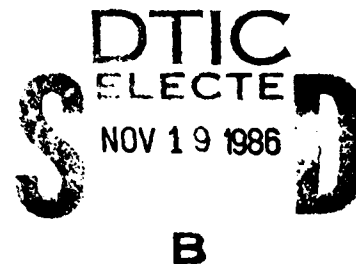
The study concludes that the conceptual framework furnished in FM 100-5, Operations and other assorted U.S. Army manuals does not contain the appropriate amount of guidance for conducting an encirclement operation. The doctrine as stated by the Soviets does contain information that could prove beneficial to U.S. Army doctrine writers and should be closely studied for possible ideas and conclusions that might prove applicable to our new style of warfare.

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**22 May 1986**

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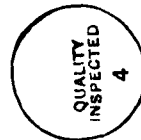
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ABSTRACT

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encirclement*

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The study concludes that the conceptual framework furnished in FM 100-5, Operations and other assorted U.S. Army manuals does not contain the appropriate amount of guidance for conducting an encirclement operation. <sup>SOVIET</sup> The doctrine as stated by the Soviets does contain information that could prove beneficial to U.S. Army doctrine writers, and should be closely studied for possible ideas and conclusions that might prove applicable to our new style of warfare.

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## Section I : Introduction.

From the time of Alexander at Cannae, through the Soviets at Stalingrad, to the North Vietnamese at Dien Bien Phu, the history of warfare has been filled with examples of how one army overcame an opponent by encirclement. Each instance above led to destruction of the enemy and a strategic and operational victory. Though encirclement dates back to the time of Alexander, who was the first to practice it successfully, it was not until World War II that encirclement operations fully demonstrated their potential. From the German encirclement at Minsk of over 670,000 Soviet soldiers in late 1941, Soviet military planners learned that the costly frontal attacks of previous wars could be averted and a successful outcome hastened by such operations as the encirclement.

The philosophy of encirclement operations calls for highly maneuverable forces to gain a breakthrough of enemy lines by a concentration of superior number of forces and firepower. This negates the earlier experiences in World War I of high losses of men and equipment through broad frontal attacks. A study of World War II encirclement operations indicates that unity of command and emphasis on maintaining a high mobility and offensive tempo are important planning considerations. The encirclement operation is perhaps a type of deep attack, as deep attack is described in current US Army doctrine, and it needs further study in order to be planned and conducted properly.

The possibility that encirclement operations are still applicable today needs to be taken into consideration. The disposition of Warsaw Pact forces facing NATO presents the opportunity for Allied forces to assail weakened or exposed enemy flanks, overextended formations, and cannalized forces should the Warsaw Pact initiate the attack. This presents NATO with some of the criteria necessary for conducting encirclements and annihilating these overextended enemy forces.

In World War II, encirclement operations attained a position of major prominence, one which our principal adversary, the Soviet Union, perfected and continues to espouse. Today, as U.S. Army implements the AirLand Battle doctrine, does it have the doctrinal basis from which to conduct encirclement operations? The doctrinal basis should include not only specific methods and techniques for planning and conducting encirclements, but the doctrinal environment for conducting large scale operational level warfare.

METHODOLOGY: In order to address this issue, a review of U.S. Army doctrine is necessary to determine if it adequately reflects our capability to conduct large scale encirclement operations. This includes a review of AirLand Battle (ALB) principles, the operational level of war, and deep battle concepts where one would expect to find guidance regarding such operations as the encirclement. Then certain US/Allied experiences in encirclement from World War II will be reviewed. U.S. operations in World War II displayed a certain level of expertise, but were limited when compared to the Soviet

experience. Soviet experience in World War II was extensive. The Soviets conducted ten major and 20 minor encirclement operations of which two will be described in this paper. Additionally, a recent example from a School of Advanced Military Studies exercise, which included an attempted encirclement during a NATO operation, will be investigated for lessons learned and their utility. From these examples, doctrinal issues such as unity of command, coalition warfare, doctrinal planning considerations, operational depth and educational preparation for conduct of such operations will be discussed.

## Section II : Doctrinal Backgrounds:

One of the areas of concern in the U.S. Army today is how to make its military leaders understand the operational level of war. The study of specific types of large unit maneuvers could enhance our understanding of AirLand Battle doctrine and the operational level of war. Until recently, the U.S. Army concerned itself primarily with tactical and strategic issues. Magazine articles and translations of Soviet doctrinal writings created an awareness for the operational level of war. Mr. C.N. Donnelly's articles in the late 1970's served as one of the many catalysts for rewriting of the U.S. Army's principal manual, FM 100-5, Operations.

The operational level of war encompasses the level of planning, maneuvering, and sustaining of large forces to achieve, within a theater of war, strategic goals through the effective use of campaigns and battles. How the operational level of war is conducted, and specifically how encirclement operations are planned and executed in order to satisfy strategic goals, must stem from some basis in military planning, training and education, wartime experience, and doctrinal development. The common thread which ties all this together is doctrine and the ability to implement it.

"Military doctrine is a guide to action, one objective of which is to furnish a basis for prompt and harmonious conduct by the subordinate command of a large force in accordance with the intention of the senior commander. Doctrine develops from principles."<sup>1</sup>

### U.S. Doctrine.

Doctrine serves the user as a guide to action. It does not tell the commander how to perform the operation. It lays the groundwork for developing, in this particular case, the plan. Doctrine insures a uniformity between commanders and planning staffs across the various theaters of operation where forces can be expected to fight. Though difficult to understand at times, and not necessarily a menu from which one can pick or choose courses of action or develop battle plans, doctrine does translate operating principles into an understandable format, thus allowing plans to be developed. As Field Marshall von Manstein, a highly successful and respected commander for the German Army, said,

"The granting of independence to the subordinate commander presupposes that all members of the military are imbued with certain tactical and operational axioms. Officers were trained to judge events and make appreciations, operational and tactical, according to a definite and uniform system ensuring unity of tactical and operational procedures (doctrine)."

What von Manstein is alluding to here is the need for a common doctrine within one's army, a system whereby commanders and staffs will know to a degree how others will react when confronted with certain situations, no matter in what theater of operation they occur. This does not mean a predictability that would be catastrophic once the enemy realizes how you think, but a common decision and thought making process. The U.S. Army believes that this can be done and actively espouses this commonality between commanders and staffs in the latest

version of FM 100-5, Operations.

"An army's fundamental doctrine is the condensed expression of its approach to fighting campaigns, major operations, battles and engagements... It must be rooted in time tested theories and principles, yet forward looking and adaptable to changing techniques, threats and missions. It must be definitive enough to guide operations, yet versatile enough to accommodate a wide variety of world wide situations. Finally, to be useful, doctrine must be known and understood."<sup>2</sup>

The U.S. Army's basic fighting doctrine, AirLand Battle (ALB) attempts to join together the three levels of war with which the U.S. Army will be faced. How ALB translates the action necessary to carry out operations can be found in ALB's four tenets: Initiative, Agility, Depth, and Synchronization. Each has a basic definition that must be understood by the practitioner. When understood and assimilated by the Army, the tenets, if applied properly, will fulfill the goals of the commander and ultimately lead to victory through the imposing of our will upon the enemy.

One of the tenets important to this paper is the concept of depth. "Depth is the extension of operations in space, time and resources. Through the use of depth a commander obtains the necessary space to maneuver effectively, the necessary time to plan and execute operations, and the necessary resources to win."<sup>4</sup> Conducting encirclement operations on today's battlefield, at the operational level, implies that a certain degree of depth is available.

"Destruction of the opposing force is achieved by throwing the enemy off-balance with powerful initial blows from unexpected directions..."<sup>5</sup>

"attacking deep into the rear of enemy forces to obtain leverage gives the importance to deep attack."<sup>6</sup>

COL Franz in his article, "Operational Concepts," quoting from Clausewitz's On War, talks about forces being more effective when approaching the enemy from the flank or rear thus creating leverage like that of a longer handle.<sup>7</sup> This then allows a force that would be unsuccessful in a frontal attack to carry out its mission. As stated in the latest version of FM 100-5, "envelopment is the basic form of maneuver in any doctrine which seeks to apply strength against weakness."<sup>8</sup> The manual, in discussing this form of maneuver, also mentions that envelopment requires less initial combat power, places a premium on agility, and creates gaps through which the attack takes place through the use of conventional, chemical, or nuclear fires.<sup>9</sup> The manual in one other place covers the encirclement when conducted as an element of pursuit. Here it states that the encircling force must be as mobile as the enemy, that it must be designed for semi-independent operations, and that air assault or airborne forces are most suited for this operation.<sup>10</sup> The manual uses two and a half pages to cover this operation, of which a majority of the discussion is in relationship to the pursuit. The information presented in the manual creates more questions than it answers. Perhaps the specific methodologies for performing envelopment and encirclement operations must be inferred from

discussions of deep operations or deep battle.

An investigation of other US Army doctrinal manuals such as FM 100-15, Corps Operations, Field Circular 71-100, Armored and Mechanized Division and Brigade Operations, and Field Circular 71-101, Light Infantry Division Operations which address operational issues and in particular the encirclement, reveals a similar paucity of guidance. They basically restate the concepts of FM 100-5. For a commander and his staff to develop a plan to encircle enemy forces, current US doctrine, unlike Soviet doctrine, gives little guidance and only speaks in broad, generic terms.

The student of ALB realizes that there are two areas he should further be concerned with, the deep battle and deep operations. Deep operations, at the operational level, "... includes efforts to isolate current battles and to influence where, when, and against whom future battles will be fought."<sup>11</sup> Deep operations are intended to sustain the attacking forces' momentum, prevent the enemy from developing a cohesive defense, keep reinforcements from reaching the beleaguered force, and prevent the encircled units from escaping.<sup>12</sup> All of this appears to imply encirclement but does not specifically state so, thus introducing some confusion in the mind of the reader. The whole U.S. Army doctrinal discussion of deep operations is generic in nature, providing little specific information regarding specific forms of maneuver or types of operations conducted by large operational forces.

Deep battle is more closely identified with the halting of second echelon forces from joining the battle, primarily

through the use of long range artillery, air interdiction, and on certain occasions, deep maneuver. This does not mean that deep operations are not applicable to encirclement, because deep battle must be considered when encirclement operations are performed. Deep maneuver stops the advancing second echelon or relief forces.

How does the U.S. Army intend to conduct this operation? As shown above, the Army intends to discover or create an assailable flank and then rapidly attain a breakthrough and attack the enemy's vulnerable rear. The size of the forces, the manner in which they will contain these enveloped or encircled forces, and procedures for halting relief operations are areas of concern for the planners of encirclement operations, and are not specifically elaborated in any U.S. Army doctrinal manuals. The possibility exists today that the U.S. Army will be faced with conducting encirclement operations against the Soviets or one of their allies. Because the Soviets espouse a doctrine of depth and encirclement as the primary means for annihilating the enemy, a short discourse on Soviet doctrine will follow.

#### Soviet Doctrine.

" As we know, V. I. Lenin believed encirclement of the enemy to be the most decisive form of action and he required it to be performed in accordance with all the rules of the art of war."<sup>12</sup>

The Soviets will utilize the offensive and in particular, the encirclement, as their basic form of combat operations. A creative approach must be taken today because of the changes in

warfare over the past 40 years, but Soviet doctrine writers state that methods used in the past can serve as references for today's battlefield. Their goal in Europe is to attain great depth to destroy allied nuclear delivery systems and storage depots through use of ground forces attacking weaker flank and rear positions and then annihilating enveloped or encircled Allied forces. In World War II the Soviets experienced encirclement by the Germans, and, in turn, conducted numerous tactical and operational level encirclements (as stated earlier) which ultimately led to the destruction of the German Army. Over the past 40 years considerable Soviet study has been devoted to various forms of warfare, and careful attention has been paid to improvements in technology, basically in the areas of firepower, maneuver, and use of nuclear weapons. The idea of encirclement for the Soviets is embodied in their belief in deep battle, a subject not entirely new to the US, but one practiced by the Soviets since before the 1920's and taught by Marshall Tukhachevskiy in the 1930's.

This short discourse on the operational level of war, the concepts of AirLand Battle, and Soviet doctrine as it relates to encirclement operations was developed from the course studies and readings conducted in the Advanced Military Studies Program.<sup>14</sup> Case studies on the operational level of war describe the dramatic successes that were attained by both sides on the Eastern Front during World War II. However, the same was not true in the West. In two instances, the Argentan-Failaise operation and the Bulge Counteroffensive, considerable German forces were allowed to escape attempted

encirclements, thus possibly prolonging the war. An MMAS thesis written by LTC Paul Tiberi in 1985 concerning encircled forces attempted to show how US doctrine was deficient in teaching commanders how to handle being encircled and the actions necessary to counter this.<sup>15</sup> If LTC Tiberi's thesis is correct then the possibility exists that the converse is also true; that we could find ourselves containing large scale encircled enemy forces. While we might be very proficient at tactical matters, this does not necessarily translate directly into being successful at our newly discovered operational level.

There is a considerable amount of Soviet writing on the encirclement operation, while the same does not hold true for U.S. studies of this operation. A recent study by the Strategic Studies Institute on "Operational Planning: An Analysis of the Education and Development of Effective Army Planners," noted the lack of doctrine for corps, lack of indepth training for planners, and that multiple missions for corps' staffs contributed to difficulties for the Army in the development of planners.<sup>16</sup>

Is this because of our lack of wartime experience, because we do not consider encirclements feasible on the modern battlefield above the tactical level, or is it because of our unfamiliarity with the events that have shaped modern Soviet doctrine? Finally, is ALB doctrine a suitable medium for providing the necessary guidance for this operation? The remainder of this paper will attempt to address these and other issues.

### Section III : Experience of World War II.

FM 100-5, Operations, states that the army's doctrine must be forward-looking and evolutionary, but built upon time-tested theories and principles. Examples from past conflicts can be used to explain or clarify concepts. Following this reasoning then, there are examples which demonstrate encirclement operations and lessons learned which would be applicable today.

#### Argentan-Falaise Pocket (Appendix A.)

Allied forces, primarily consisting of U.S., British, and Canadian forces, had acquired a foothold in Europe in June 1944, and after some initial setbacks had begun their expansion and penetration into France. The breakouts of Operations Goodwood and Cobra had been conducted, and now the allies moved out beyond the bocage region of Normandy. U.S. forces under General Omar Bradley had moved in a southerly direction past Granville and Avranches and were now beginning to turn eastward towards Le Mans and Orleans. The British and Canadians under Field Marshall Montgomery had captured Caen and were in the process of initiating Operation Totalize southwards towards Falaise. General Eisenhower saw the possibility of conducting a deep encirclement, by driving to the Paris-Orleans gap and to the Seine River, thus trapping a sizeable German force against the Seine river.<sup>17</sup> General Bradley, however, felt that if U.S. forces instead immediately diverted northward to Argentan, there would be only a 50 kilometer gap between his army group

and Montgomery's at Falaise, thereby making a shorter envelopment. The U.S. and Canadian forces could then meet halfway, sealing off and isolating approximately two German armies. As Patton said, "The purpose of the operation is to surround and destroy the German army west of the Seine."<sup>12</sup>

An army group boundary between the two converging army groups had been established roughly in the area north of Argentan, and Montgomery was confident that his forces would reach Argentan before the U.S. The opposite occurred however, and suddenly a gap was created between Falaise where the Canadians had stopped and Argentan where U.S. forces had expected the linkup to occur. U.S. forces continued to move northward across the established army group boundary to linkup with the Canadians, but were pulled back because of exposure of an assailable flank. Because of this, a 25 kilometer gap developed through which large parts of the German armies eventually escaped.

An analysis of this operation shows that hesitancy on the part of the Allied army group commanders, a weakening of the attacking force by diverting armored forces westward into Brittany, a fear that converging artillery and infantry forces would begin committing fratricide because of a lack of prearranged coordination, and possible interference with Allied air force interdiction missions were stated as reasons which doomed the encirclement to failure. One of the major lessons of this campaign was that a single overall commander should be responsible for this operation. Eisenhower's lack of proximity to the operation and his dependence upon message traffic led to

delays in the decisionmaking process which allowed the Germans to react quickly to the tactical situation. A forward command post to coordinate the two converging army groups would have facilitated resolving the boundary problems. This command and control element would have additionally insured timely and accurate close air support and artillery coordination. Finally the control element would have insured that the converging forces had established linkup points, thus alleviating the fear of fratricide held by General Bradley.

Ardennes Counteroffensive. (Appendix B.)

By Christmas 1944, the German counteroffensive in the Ardennes had begun to bog down and Hitler's goal of obtaining Meuse crossings and driving a wedge between the two Allied army groups was showing itself to be a failure. The relief of encircled U.S. forces at Bastogne had been completed in late December, and now General Eisenhower proposed to initiate a counteroffensive against German forces within the Bulge salient. After carefully analyzing the terrain, and observing how troops in the two army groups were deployed, the ultimate goals of the operation were developed. From this analysis three courses of action were looked at: cutting the enemy off at the base of the salient, cutting the waist of the salient, or conducting a counterattack (Montgomery's recommendation). The mission, enemy, troops, and in particular, terrain caused Eisenhower to decide on cutting the bulge at the waist. Once again, as in Argentan-Falaise, Montgomery would drive from the

north with the temporarily attached U.S. First Army, and Bradley would drive from the south with the U.S. Third Army towards Houffalize.

General Patton's Third Army advanced on a broad front from the south while First Army under General Hodges, after a delay in starting the operation, moved on a narrower front towards Houffalize. Resistance by German forces stiffened as they realized they were about to be encircled. Because of stubborn delaying tactics, the Germans escaped the entrapment and were able to fight again. The Americans did succeed in cutting the Bulge at the waist, but did not capture or destroy large German forces as planned. The Allies then continued their operations to the east .

Lessons learned from this operation closely parallel those from the Argentan-Falaise operation. An area of concern that arose again was the maneuvering of two separate army groups advancing on a closure point. Because of lack of unity of command and a basic misunderstanding of encirclement operational procedures, the Allies wasted another opportunity for eliminating German forces. Again, unity of command and a single commander overseeing the entire operation of the two converging armies would have assisted in trapping a greater number of German soldiers. Advancing on a wide front versus a narrow front and lack of clearly defined objectives once linkup was accomplished showed a deficiency and lack of understanding of encirclement operations by the Allied staffs. Coalition warfare also caused problems since one army was controlled by Montgomery who was thinking tactically while Bradley was

looking operationally at encircling the Germans and continuing the drive to the east.

When considered together, the two case studies demonstrate many lessons, but neither case necessarily offers doctrinal writers much material on how encirclement operations should be conducted. The possibility arises that other examples, not necessarily American or Allied, might provide answers for our doctrinal problems. A closer look at the Soviet experiences in World War II and how their doctrine has evolved concerning encirclement operations is appropriate.

#### Soviet Experience in World War II.

While AirLand Battle doctrine has created a new mind set for U.S. Army planners in the last few years, the Soviets have been developing a doctrine that has included the operational level of war since the early 1920's. Marshall Tukhachevskiy, who was executed in the purges in the late 1930's along with the majority of the Soviet Union's high ranking military officers, had raised the competence of Soviet military thinking and planning. After the purges of the officer corps in the 1930's the inexperience of new Soviet commanders and staffs became apparent when Operation Barbarossa was launched in 1941 and the Germans overran most of European Russia. However, because of Lend-Lease, the depth of Russia, German strategic overextension, and Stalin's iron fisted rule, the Soviet Union began the long road to recovery and ultimate victory. Along this route many lessons were relearned and combat skills at all levels were improved upon.

The area that concerns us here is the Soviets' ability to plan and conduct encirclement operations. After losing 670,000 men at Minsk in 1941, the Soviets began to realize that this type of operation had more to offer than frontal attacks. Initially, losses were great because of lack of combat and planning experience of the higher ranking commanders and staffs.

Throughout the war, the Soviets conducted ten major and 20 minor encirclement operations which resulted in the destruction of 200 Axis divisions. The traditional form of Soviet offensive operation was the encirclement<sup>19</sup>. The Soviet Army's equivalent to the U.S Field Manual 100-5, Field Service Regulation (FSR), 1944 states that " the encirclement should strive above all to deprive the enemy of freedom of maneuver and the opportunity of obtaining assistance from adjacent units or from the rear."<sup>20</sup> This was practiced through the exercise of centralized command and control of combat and logistic resources at the highest levels.<sup>21</sup> The Soviets' basic concept of the operation was the massing of forces at the point of penetration (preferably along a unit boundary or against a German ally) with forces achieving a ratio of at least six or eight to one. The preponderance of forces would be armored to effect the penetration and breakthrough. In the case of either a single or double envelopment, once encirclement was achieved, an inner ring would be formed called a "circumvallation" that would be manned by the follow on infantry forces. Their mission would be to eliminate the pocket and prevent any breakout attempts by the surrounded enemy force. Concurrently,

the armored forces would begin to create an outer ring called a "contravallation" that would serve as a deterrent against attempted relief force attacks. These forces would continue the expansion of the encirclement area out to operational depths, thus making attempts to escape more difficult for trapped enemy forces. The zone between the inner and outer rings would be used by artillery, reserves, and mobile forces to shore up any weak points and to assist in eliminating the inner pocket while helping in the expansion of the outer ring. Through trial and error, this concept evolved, until in the 1944 edition of Soviet Field Service Regulation (FSR), considerable space was devoted to conducting encirclement operations.

Since 1944, technology has played a major role in bringing Soviet doctrine up to date, and even though encirclement is still a highly regarded form of maneuver, the introduction of nuclear weapons has caused the Soviets to redefine this operation. The maneuverability of the troops to be encircled, the difficulty of massing troops at the penetration points, the vast assets needed for inner and outer rings, the threat of nuclear weapons, and finally the possible destruction of friendly valuable assets within the encirclement, appear to make this form of maneuver less desirable on the modern battlefield.<sup>22</sup> However, it is still ascribed to in Soviet doctrine because of the results it can produce. Therefore, two selected campaigns from World War II will be summarized to see what lessons learned would be applicable to our doctrine today.

Korsun-Shevchenkivskiy. (Appendix C.)

In early 1944, a German bulge developed south of Kiev, with its front line bordering on the Dniepr River. This created a salient which separated the First and Second Soviet Ukrainian Fronts. This wedge endangered future operations for the two fronts, and it presented the perfect opportunity for an encirclement and destruction of over 60,000 German soldiers. Having just conducted difficult operations with no respite, Stavka directed Generals Vatutin and Konev to initiate encirclement operations immediately. Within two weeks, deception measures were taken, the necessary realignment of forces occurred throughout the area of operation, rehearsals had been conducted, and forces were given their specific missions. Additionally, the Soviets used their previous experience at Stalingrad in 1942 as an instructional basis in preparing commanders for the Korsun-Shevchenkivskii operation. 22

The operation was spearheaded by armor formations which severed the bulge and encircled six to ten German divisions. Once the link up was performed by the two armies, and inner and outer rings connected, the elimination of the pocket ensued. Repeated attempts were made by German relief forces to create a corridor for the encircled forces to escape through, but they were constantly repelled. However, the improper positioning of Soviet infantry troops on the inner circle resulted in over 30,000 German troops escaping. The Soviets were not able to block all of the escape routes available to the Germans. In

this case, a mix of mobile armored and mechanized infantry forces could have blocked the escape routes and probably annihilated the partially successful breakout. Though it was a major success for the Germans to get so many soldiers out, they had to leave all their heavy equipment, artillery, and armor behind and come out on foot. Though the losses were disputed on both sides, the Soviet victory here opened the way for further operations through the Ukraine and into Eastern Europe.

The Soviets learned the importance of rapid movement to close off escape routes, and the need for both strong infantry and mobile forces in the inner ring and mobile armor on the outer ring. Considerable preparations, rehearsals, deception, fully integrated combined arms plans, and seizing the initiative supplemented these lessons learned. The coordination between army groups was given great attention and resulted in Stavka assigning a general officer and small staff to coordinate this type operation.

Jassy-kishinev. (Appendix D.)

The Germans had fallen back to a defensive line along the Dniester River in the summer of 1944 and were preparing for Soviet attacks along the entire Eastern Front. Because of the major Soviet offensive in the German Army Group Center's sector, Army Group South Ukraine was ordered to release six panzer, one mechanized, and five infantry divisions to buttress Army Group Center's sector. Because of the success of the Soviet offensive to the north in German Army Group Center's

sector, a salient of over 150 kilometers was created which effectively left Army Group South Ukraine isolated from further military support.<sup>25</sup> German Army Group South Ukraine represented the last line of defense in front of the vital Rumanian oil fields. A failure to maintain this defensive line would expose the Germans' southern flank and open up the Balkans to Soviet conquest.<sup>26</sup>

The Jassy-Kishinev campaign saw the Soviets again move forces for the penetration to the flanks of the German defensive line. Realizing that the German defense was strong but lacked depth, and that no sizable German reserves existed, the Soviets planned for the inner ring of the encirclement to be formed and controlled by infantry forces. Once the outer ring was connected by armored forces, they would then proceed rapidly to move out to operational depth, thus making escape almost impossible. Additionally, the attacks were planned against Rumanian forces or along Rumanian - German boundaries. The correlation of forces at the points of attack would attain ratios of eight to one. To keep the Germans from attempting a withdrawal to the Prut river, heavy pressure would be mounted frontally by another Soviet army, thus allowing the Soviets to gain control of all Prut river crossing sites.

The actual attack began on 20 August 1944 with a massive artillery preparation, after which Soviet armored formations spearheaded the attack. Once the inner ring was established and secured by the infantry, the armored forces connected the outer ring and began driving outwards to the operational depth across the Prut and Siret rivers. Jassy and Kishinev fell on 23 and

24 August, respectively, and then the Ploesti oilfields and Bucharest on 29 and 30 August. The Soviets used infantry to annihilate German forces inside the inner ring while the outer ring was secured and expanded by armored forces which secured territory down to the Danube (over 250 kilometers) in less than two weeks.

Lessons to be learned from this operation cover both the tactical and operational realms. The plan was sophisticated, well-conceived, thoroughly rehearsed, war-gamed, and it followed the principles of encirclement as set forth in the Soviet 1944 FSR. The use of deep maneuver and its exploitation to operational depths and proper use of combat support forces resulted in almost 200,000 killed or captured German soldiers and the fall of Rumania. The battle, though not well known in the West, consisted of over two million soldiers, and eventually saw the German 6th Army destroyed for the second time (Stalingrad was the first).

#### Section IV : U.S. Wargame Experience.

During a recent wargame exercise at the School of Advanced Military Studies, students and faculty had an opportunity to conduct a type of envelopment-encirclement operation.<sup>27</sup> The exercise was played principally at the army group level of command with students and faculty occupying positions at AFCENT, NORTHAG, CENTAG, 2 ATAF, 4 ATAF, AAFCE, and the respective corps level forces assigned to the army groups. Also included were assorted commands such as the Canadian Brigade and the 1st French Army.

NATO had deployed to its General Defense Plan (GDP) positions in preparation for the Warsaw Pact (WP) attack. Concurrent attacks were made by the WP forces, one across the Northern German Plain toward the English Channel ports, and the other in the CENTAG sector towards the Rhine River crossings between Frankfurt and Coblenz. In the NORTHAG sector forces on its southern flank were not containing WP advances along its army group boundary with CENTAG.

Along the army group boundary between NORTHAG and CENTAG, a major salient was being formed, possibly leading to a split of AFCENT forces. This salient presented to AFCENT the opportunity to conduct an encirclement operation, thus shoring up the central region defenses and then allowing AFCENT to direct its attention to operations in the NORTHAG region and its threatened LOCs.

Available to the AFCENT commander was a U.S. Army corps in the north and a French army (equivalent to a U.S. corps) in

CENTAG's region. The second echelon armies for the Soviets were not available yet to widen the salient and obtain the deep penetration and possible victory they hoped for. The operation called for NORTHAG and CENTAG forces to hold the proverbial "bottom of the bag" while Soviet forces piled up, thus allowing the two Allied encircling forces to attack through mainly Soviet combat support forces. However, NORTHAG's northern area of operations was being pushed back onto the channel ports. This caused the NORTHAG commander's attention to be diverted from preparation for the encirclement. This would create problems eventually for the US corps when it initiated the encirclement operation. The overall command of the operation was AFCENT's responsibility, but control of forces in the army group sectors was delegated to the army group commanders. The two separate attacks were made, but failed to complete the encirclement and thereby lost an opportunity of restoring stability to the front between the two army groups.

The problems of coalition coordination, realigning an army group's boundary in order to facilitate command and control, coordination between army and air forces, and lack of clear command of the overall operation created a breakdown in the encirclement. Inadequate number of forces, lack of combat support (artillery and air defense), lack of a definite plan for eliminating forces within the pocket, and the halting of possible relief forces were overlooked or not considered.

## Section V : Toward a Doctrine for Encirclement Operations:

A comparative analysis of Soviet and American experiences in conducting encirclement operations shows a difference in degree of sophistication. The Soviets developed doctrine for deep operations and taught encirclement as their primary form of offensive maneuver. They long have realized that an operational level of war is decisive, while the U.S. has been concerned with strategic and tactical issues. The US's view was more oriented on strategic victory and appeared to believe that tactics were the means to this end. Although operations like Cobra, Falaise-Argentan, Bulge counteroffensive, and the push to the heartland of Germany were operational in nature, U.S. commanders did not seem to articulate their objectives in an operational manner.

U.S. commanders felt that attrition of the enemy, both by bombardment and onslaught of forces against the enemy, would lead to ultimate victory. U.S. artillery came to the forefront and was one of the deciding factors in the eventual outcome. Since then, the US Army and its doctrine writers have realized that annihilation of the enemy, not attrition, will play a major role in the war. The concept of annihilation was practiced by the Soviets during World War II and guided their offensive thinking. This concept caused the envelopment to be one of their major form of offense, and the results from World War II speak for themselves. As the US adopts the AirLand Battle doctrine, with its demand for depth, initiative, maneuver, etc., the encirclement may offer itself as one means

by which enemy forces can be annihilated and the war brought to an end on our terms.

Doctrine, as shown earlier, should create a common understanding by those entrusted with implementing it. The knowledge of US doctrine translated into action, hopefully, will result in successful operations and attainment of US strategic, operational, and tactical goals. When looking at US doctrine, and in the case of this paper, its applicability to encirclement/envelopment operations, doctrine's goals as a user's guide to action are not adequately met. The paucity of information in FM 100-5 and its generic descriptions lead to interpretive problems. US Army doctrine needs to address encirclement operations. Some of the areas of consideration, though not all-inclusive, are: coalition warfare, command and control, planning factors, the area of operations, and the educational system.

#### 1. Coalition Warfare.

The U.S. Army cannot wait until the next conflict to develop the procedures that will ultimately lead to victory. Our position in Europe right now demands that we be prepared to operate in the combined arena, and if past examples are a precursor of events to come, the US is in a perilous position. Coordination procedures for conducting large scale operations, such as the encirclement, need to be constantly addressed and updated in order to insure that the basic principles are understood and agreed upon by the coalition's members. The

Soviets realized a need for homogeneity of forces that the allied forces did not possess in World War II. The Soviets now depend greatly on their Warsaw Pact allies to provide forces for carrying out large operations. The U.S. should look closely at how the Soviets plan to perform encirclement operations, and then consider obtaining NATO agreement on the more applicable lessons.

## 2. Unity of Command.

Command and control procedures are not detailed in our doctrine. The Soviets realized that each enveloping arm's commander was totally concerned with his respective operation. STAVKA was too far to the rear in Moscow, therefore a coordination cell with authority to direct and control the overall operation was established. If this had been done at Argentan-Falaise, the boundaries might have been shifted earlier and at least one German army destroyed.

Possible considerations for achieving unity of command in this situation which would have application in NATO today would be AFCENT assuming control of the operation or shifting of an inter-army group boundary, with realignment of forces to a new army group.

## 3. Planning Considerations.

The Soviets devoted considerable time and effort to preparing and carrying out envelopments. On the other hand, the Falaise-Argentan operation was carried out almost as an afterthought, while the Bulge counteroffensive was initially

developed in general terms, but not further elaborated into a well developed plan with all contingencies considered. Rehearsals, deception, large movements of forces, and repositioning of logistic stores demonstrated the depth of Soviet planning, while the U.S.'s operations appeared to be more freestyle and less coordinated. Specific tactics and techniques for this operation includes concentration of forces, formation of inner and outer rings, close air support, artillery support, sustainment, and containment and elimination of enemy forces in the encirclement.

#### 4. Operational Depth.

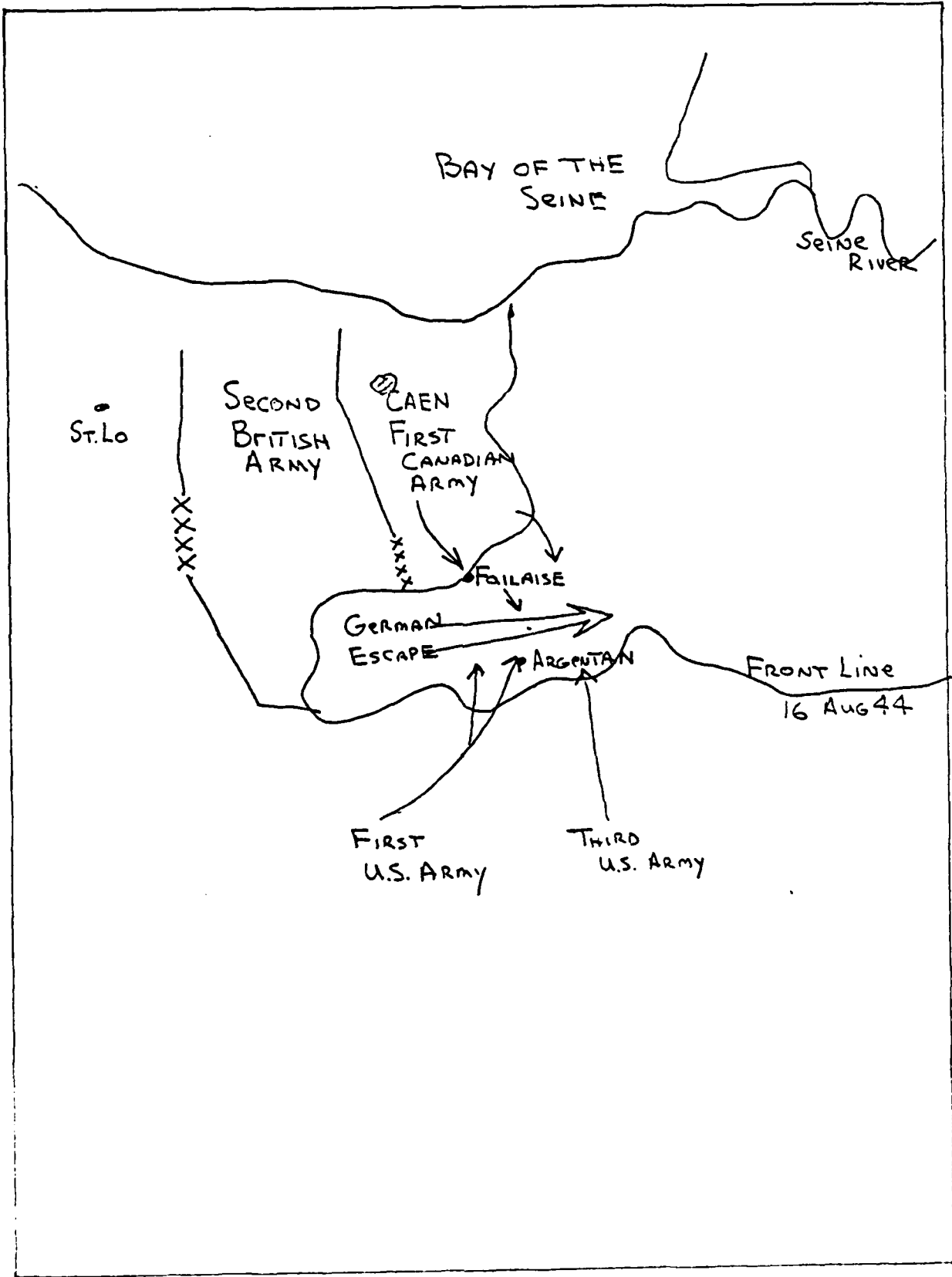
A look at the area of operations in respect to time, resources, and space in which the Soviets and the U.S. operated shows why the Soviets may have been more successful. The Soviets were practicing warfare over a vast area of unpopulated territory, good for maneuver, and, most important, on their own territory. The U.S. in 1944 had just recently made a forced entry into an area of Europe which contained adequate maneuver room. (Italy had not been conducive to maneuver warfare, and the U.S. North Africa campaign had been too short and too early an experience to develop full combat experience.) The area in which the Soviets operated for over four years included frontages of 50-150 kilometers, and depths of penetration calculated to be at least 75-125 kilometers. These distances were great compared to what was available to U.S. forces during the short duration from June 1944 to April 1945, when U.S. forces operated in Northwest Europe.

## 5. Educational Preparation.

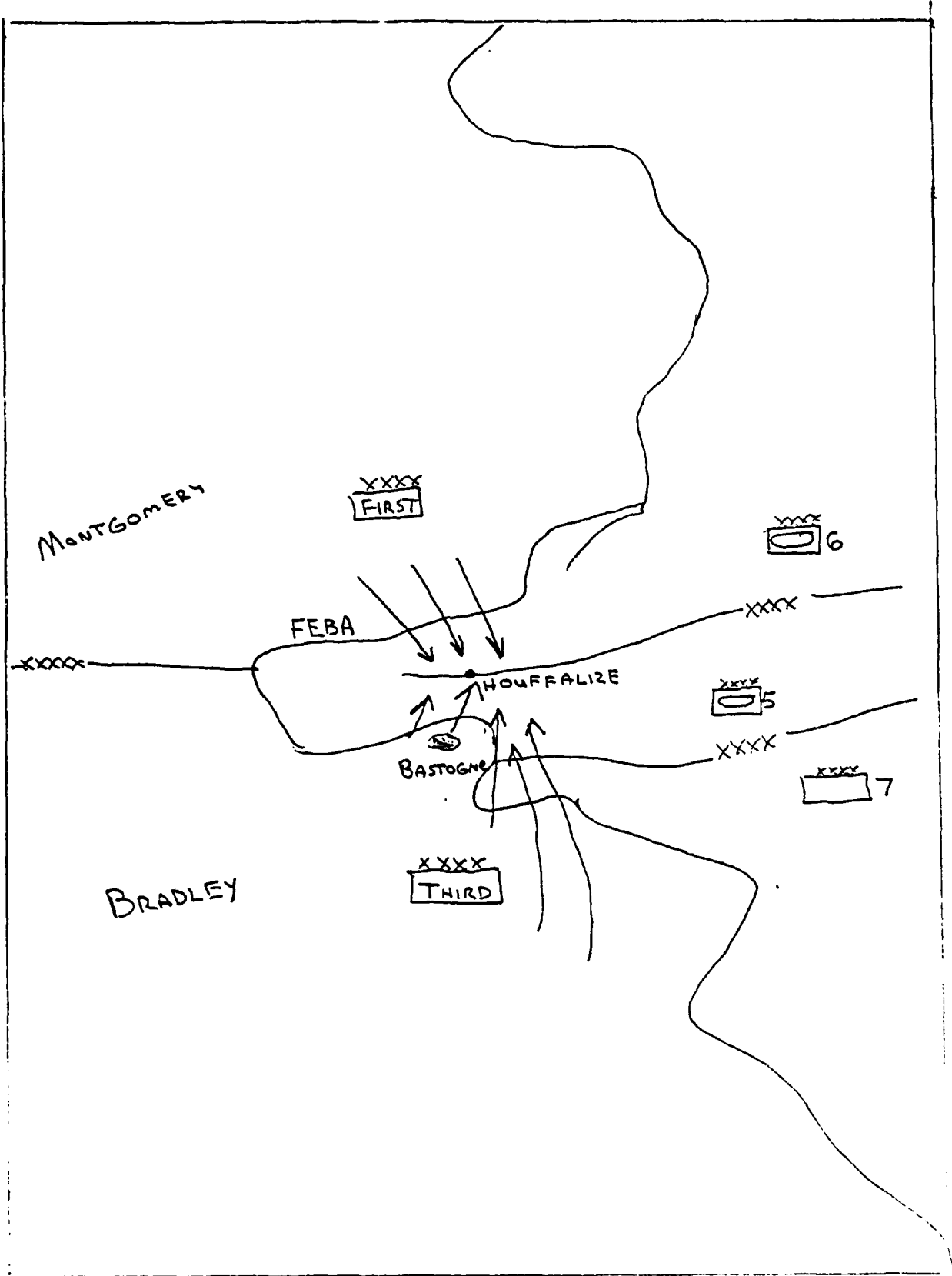
The Soviets were successful because of the time and distance factors in their favor, a doctrine that stressed maneuver and the operational art, and an educational system that was conducive to preparing planners and commanders. The homogeneity of forces, an understanding of the operational art, and a belief that encirclement was the primary form of offensive maneuver for annihilating the enemy made their system successful. The US's lack of experience, having to fight as part of a coalition, dependence on attrition methods, lack of operational knowledge, and lack of adequate area over which to operate are lessons to be seriously considered as US doctrine evolves.

The current U.S. doctrine stresses agility, initiative, depth, and synchronization. U.S. lacks experience at practicing one of the forms of offensive operations that requires these important tenets. This paper has tried to show that AirLand Battle doctrine has inadequately covered the concept of the encirclement. If the situation were to arise where senior commanders would have to use this form of offensive against adversary forces, the necessary background would be missing and possibly cause mission failure. Soviet experience has resulted in a doctrine which might serve U.S. doctrine writers well to study as a basis for developing a more cogent offensive form of maneuver and doctrine that if practical, might result in US success on the future battlefield.

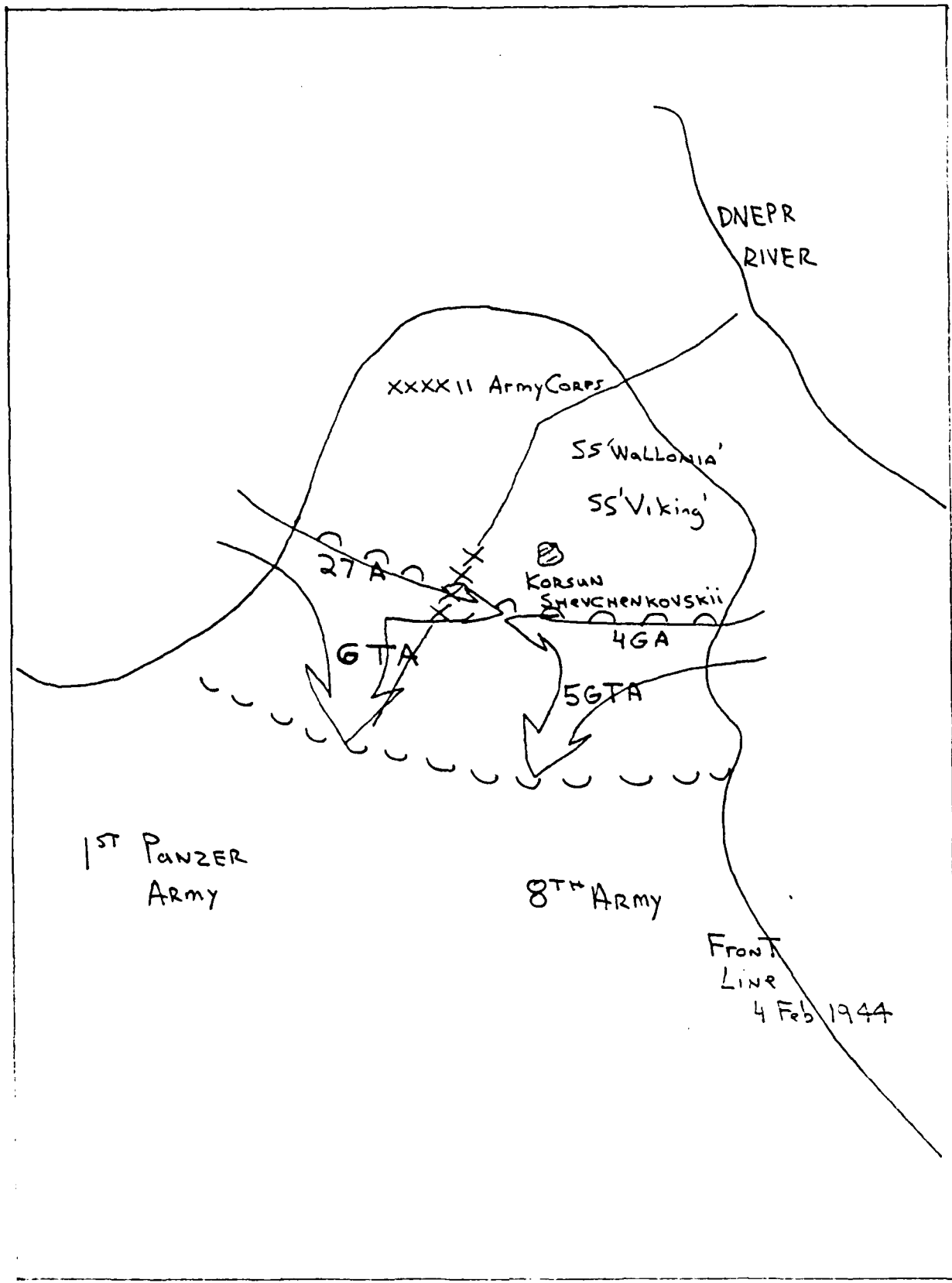
Argentan-Falaise



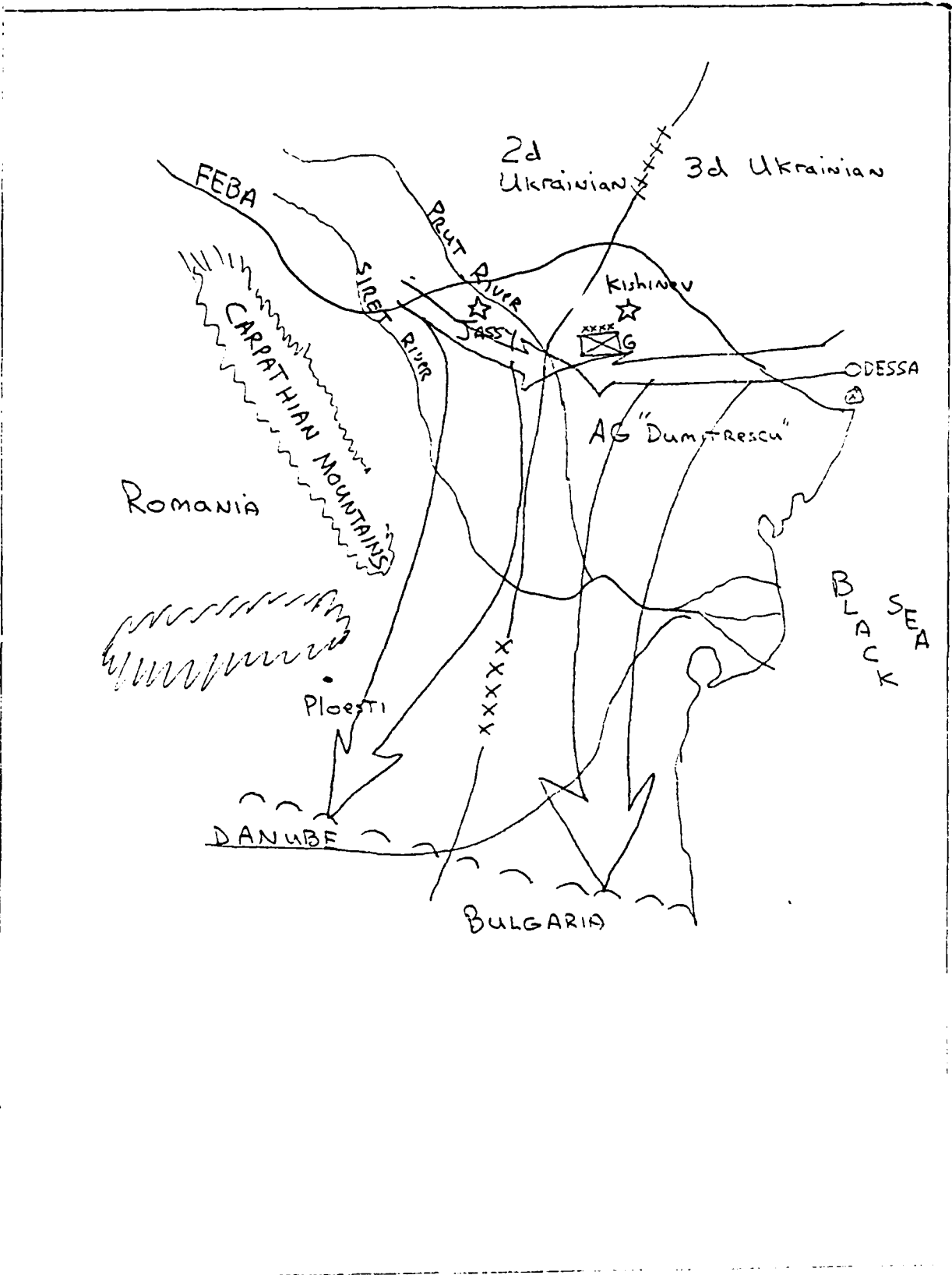
Ardennes Counteroffensive



Korsun-Shevchenkovski



Jassy-Kishinev



## ENDNOTES

1. Wallace P. Franz, "Operational Concepts," Military Review, October 1985, p. 4.
2. Ibid., p. 3.
3. U.S. Army, Field Manual 100-5, Operations (Final Draft), October 1985, p. 1-11.
4. Ibid., p. 2-18.
5. Franz, pp. 2,3.
6. Ibid., p. 13.
7. Ibid., p. 13.
8. U.S. Army, Field Manual 100-5, Operations, May 1986, p. 101.
9. Ibid., p. 6-21.
10. Ibid., p. 7-26.
11. Ibid., p. 2-23.
12. Ibid., p. 3-27.
13. Victor A. Matsulenکو, Encirclement Operations and Combat, (Foreign Broadcast Information Service, 28 September 1985), p. 1.
14. School of Advanced Military Studies (SAMS), Combined NATO Exercise (NATOEX), 19-28 February 1986, Fort Leavenworth, Kansas.
15. LTC Paul Tiberi, Encircled Forces: The Neglected Phenomenon of Warfare, May 1985, MMAS Thesis, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas.
16. William G. Hanne, "AirLand Battle : Doctrine, Not Dogma," Military Review, June 1983, p. 23.
17. Russell F. Weigley, Eisenhower's Lieutenants, (Bloomington : Indiana University Press, 1981), p. 199.
18. Ibid., p. 199.
19. Charles J. Dick, "Soviet Operational Concepts : Part II," Military Review, October 1985, p. 15.
20. Red Army Field Regulations, Field Service Regulation 1944, translated by Military Affairs, 17 January 1985, p. 82.

21. Dick, p. 15.
22. Major General S. Shtrik, "The Encirclement and Destruction of the Enemy During Combat Operations Not Involving the Use of Nuclear Operations," Voyennaya Mysl, Jan 1968, p. 283.
23. Scott R. McMichael, "The Battle of Jassy-Kishinev," Military Review, p. 53.
24. Ibid., p. 53.
25. Ibid., p. 54.
26. Ibid., p. 64.
27. SAMS NATOEX.

## BIBLIOGRAPHY

### Books:

- Carell, Paul. Scorched Earth. New York: Ballentine Books, 1966.
- Matsulenko, Viktor Antonovich. Encirclement Operations and Combat. Translated and published by Foreign Broadcast and Information Service (JPRS:UMA-84-019-L), 28 September 1984.
- McDonald, Charles B. A Time For Trumpets. New York: Bantam Books, 1984.
- Mellenthin, F.W.von, and Stolfi, R.H.S. with E. Sobik. NATO Under Attack. Durham: Duke University Press, 1984.
- Savkin, V. Ye. The Basic Principles of Operational Art and Tactics (A Soviet View). Translated and published under the auspices of the U.S. Air Force. Washington: U.S. Government Printing Office, 1974.
- Scott, Harriet Fast and William F. The Soviet Art of War: Doctrine, Strategy, and Tactics. Boulder: Westview Press, 1982.
- Sidorenko, A.A. The Offensive (A Soviet View). Translated and published under the auspices of the U.S. Air Force. Washington: U.S. Government Printing Office, 1973.
- Simpkin, Richard E. Red Armour: An Examination of the Soviet Mobile Force Concept. London: Brassey's Defence Publishers, 1984.
- . Tank Warfare: An Analysis of Soviet and Nato Tank Philosophy. London: Brassey's Defence Publishers, 1979.
- Sokolovskiy, V.D., ed. Soviet Military Strategy. 3d ed. Translated and edited by Harriet Fast Scott. New York: Crane, Russak, and Co., 1975.
- Vigor, Peter H. Soviet Blitzkrieg Theory. New York: St. Martin's Press, 1983.
- Weigley, Russell F. Eisenhower's Lieutenants. Bloomington: Indiana University Press, 1981.

### Government Documents:

- Glantz, David M. "August Storm: The Soviet 1945 Strategic Offensive in Manchuria." Leavenworth Papers No. 7, Fort

Leavenworth, Ks: U.S. Army Command and General Staff College, 1983.

-----  
". "August Storm: Soviet Tactical and Operational Combat in Manchuria." Leavenworth Papers No. 8, Fort Leavenworth, Ks: U.S. Army Command and General Staff College, 1983.

-----  
". "The Great Patriotic War and the Maturation of Operational Art:1941-1945(Draft)." Carlisle, Pennsylvania: U.S. Army War College, 1985.

Reinhardt, Hellmuth. "Encirclement and Breakout of First Panzer Army." In Selected German Army Operations on the Eastern Front (Operational). Carlisle, Pa: U.S. Army War College, 1983.

Union of Soviet Socialist Republics. Red Army Field Regulations. Translated by the Foreign Broadcast Information Service (JPRS-UMA-85-006), 17 January 1985.

U.S. Department of the Army. Department of the Army Pamphlet 20-234: Operations of Encircled Forces: German Experiences in Russia. Washington: U.S. Government Printing Office, 1952.

-----  
". Field Service Regulation 100-5, Operations. Washington: U.S. Government Printing Office, 1944.

-----  
". Field Manual 100-5, Operations (Final Draft). Washington: U.S. Government Printing Office, 28 October 1985.

-----  
", Field Manual 100-5, Operations, Washington: U.S. Government Printing Office, May 1986.

-----  
". Field Manual 100-15, Corps Operations (Draft). Washington: U.S. Government Printing Office, 1985.

U.S. Department of Defense. "Studies on Soviet Combat Performance." Prepared by Historical Evaluation and Research Organization. Dunn Loring, Virginia, 1977.

#### Periodicals and Articles:

Aubin, Stephen P. and Kells, Robert E., Jr. "AirLand Battle Doctrine: Soviet Strategy Revisited." Military Review, LXV (October 1985), pp. 42-53.

Dick, Charles J. "Soviet Operational Concepts: Part II." Military Review, LXV (October 1985), pp. 4-19.

- Donnelly, C.N. "The Development of Soviet Military Doctrine." Military Review, LXII (August 1982), pp. 38-51.
- Donnelly, C.N. "The Soviet Operational Maneuver Group: A New Challenge for NATO." Military Review, LXIII (March 1983), pp. 43-60.
- Franz, Wallace P. "Operational Concepts." Military Review, LXIV (October 1985), pp. 2-15.
- Glantz, David M. "Soviet Operational Formations for Battle: A Perspective." Military Review, LXIII (February 1983), pp. 2-11.
- Golovchiner, B.M. "Encirclement and Annihilation of Groupings of Defending Troops." Soviet Military Thought. 1969-1973.
- Hanna, William G. "AirLand Battle: Doctrine, Not Dogma." Military Review, LXIII (June 1983), pp. 11-25.
- Korbrin, Colonel N. "Encirclement Operations." Soviet Military Review, No. 8 (August 1981), pp. 36-39.
- McMichael, Scott R. "The Battle of Jassy-Kishinev." Military Review, LXV (July 1985), pp. 52-65.
- Nikolayev, D. "Jassy-Kishinev Offensive Operations." Soviet Military Review, No. 5 (May 1967), pp. 42-46.
- Pergent, J. "Breakthrough or Encirclement?" Military Review, XXXVIII (January 1959), pp. 95-103.
- Rotmistrov, P. "To the Twentieth Anniversary of the Korsun-Shevchenkivskii Operation." Voyenny Vestnik (Military Herald), No. 2, (February 1964), pp. .
- Shtrik, S.V. "The Encirclement and Destruction of the Enemy During Operations not Involving the Use of Nuclear Weapons." Soviet Military Thought, No. 1 (January 1968), pp. 279-292.
- Vigor, Peter H. and Donnelly, Christopher. "The Manchurian Campaign and its Relevance to Modern Strategy." Comparative Strategy, No. 2 (1980), pp. 159-178.

Unpublished Material:

- U.S. Department of the Army. Selected German Army Operations on the Eastern Front (Operational). Fort Leavenworth, Ks: School of Advanced Military Studies, U.S. Army Command and General Staff College, June 1984.

**Student Papers:**

**Tiberi, Paul. "Encircled Forces: The Neglected Phenomenom of Warfare." MMAS Thesis, US Army Command and General Staff College, Fort Leavenworth, Ks, May 1985.**

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