

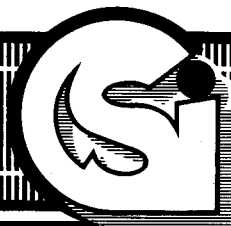
HISTORICAL
BIBLIOGRAPHY No. 5

Deception Operations

by
Dr. Gary J. Bjorge

January 1986

86-2537



COMBAT
STUDIES
INSTITUTE

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE JAN 1986		2. REPORT TYPE		3. DATES COVERED 00-00-1986 to 00-00-1986	
4. TITLE AND SUBTITLE Historical Bibliography Number 5. Deception Operations				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Army Combined Arms Center,Combat Studies Institute,Fort Leavenworth,KS,66027				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES 40	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

HISTORICAL BIBLIOGRAPHY No. 5

Deception Operations

by
Dr. Gary J. Bjorge

January 1986

U.S. Army Command and General Staff College
Fort Leavenworth, Kansas 66027-6900

-2537



COMBAT
STUDIES
INSTITUTE

CONTENTS

PREFACE	v
I. DECEPTION	
A. Books	1
B. Articles	5
C. Government Reports, Manuals, and Studies	11
II. CAMOUFLAGE AND CONCEALMENT	
A. Books	19
B. Articles	21
C. Government Reports, Manuals, and Studies	27
III. SUBJECT INDEX	31

PREFACE

The focus of this bibliography is on deception at the operational level of war. However, because successful deception at this level depends on successful tactical-level deception and excellent camouflage and concealment, material on these related topics is also included.

All of the sources cited in this bibliography can be found in the Combined Arms Research Library (CARL) at Fort Leavenworth, Kansas. Many of the books and magazine articles that are cited are available in large public libraries around the United States. Numerous items, however, exist only in a specialized library such as CARL. To assist readers in locating the items cited in this bibliography, CARL document numbers (N numbers) and Defense Technical Information Center numbers (DTIC numbers) are provided for sources that have them. To ensure the widest distribution for this bibliography, no classified sources have been cited.

I. DECEPTION

Part A—Books

1. Beaumont, Roger. *Maskirovka: Soviet Camouflage, Concealment and Deception*. College Station, TX: Texas A&M University System, 1982.

In Soviet terminology, concealment, camouflage, and deception are unified under the word *maskirovka*. This study shows how systematic and thorough the Soviets are in their approach to *maskirovka* at all levels—strategic, operational, and tactical. Beaumont discusses methods of *maskirovka* and the relationship between *maskirovka* and surprise, presenting historical examples of successful Soviet *maskirovka* operations. The military applications of Soviet research into the psychology of awareness, perception, and reaction to surprise are also discussed. The author expresses his concern about the ability of Americans to cope with Soviet *maskirovka* stratagems.

2. Betts, Richard K. *Surprise Attack: Lessons for Defense Planning*. Washington, DC: Brookings Institution, 1982.

Ways in which deception contributes to achieving surprise are examined in this book. Betts analyzes the nature of deception and the reasons why it succeeds. He describes the successful use of deception by Hitler in World War II, Israel in the Six-Day War, Egypt in the October War, and the Soviet Army during its 1945 Manchurian campaign. Possible future Soviet deception operations along the central NATO front are discussed.

3. Brown, Anthony Cave. *Bodyguard of Lies*. New York: Harper & Row, 1975.

The major strategic- and operational-level deception operations carried out by British and American forces during World War II are described in detail in this excellent, well-documented book. The evolution of deception planning and operations during the war comes alive as the author describes Allied deception efforts and German reactions to them. This is an excellent study of how to organize and implement deception operations.

4. Cruickshank, Charles. *Deception in World War II*. New York: Oxford University Press, 1980.

This book contains descriptions of the most significant deception operations carried out during World War II in the areas of Europe and North Africa, including some of a diplomatic nature.

Deception techniques and methods, the need for thorough planning and security, and the great benefits that can result from deception are described. This book shows how the U.S. Army's attitude changed from skepticism toward deception to one of advocacy as World War II progressed and the value of deception became clear.

5. Daniel, Donald C., and Katherine L. Herbig, eds. *Strategic Military Deception*. New York: Pergamon Press, 1982.

This excellent book consists of sixteen essays almost equally divided between the theory and the practice of deception. Among the theoretical articles are analyses of the nature and the process of deception. The deception operations that are examined include German, American-British, and Soviet operations during World War II; Chinese deception practices during the Chinese Civil War; and Egyptian deception in their 1973 war with Israel. This book is must reading for the student of deception.

6. Eisenhower, John S. D. *The Bitter Woods*. New York: G. P. Putnam's Sons, 1969.

The contribution of deception to the success of the German's Ardennes offensive is discussed. Chapter 9, "Allied Intelligence is Befuddled," examines the reasons why Allied intelligence failed to correctly assess German capabilities and intentions. The conclusion is that because German deception encouraged the Allies to believe what they wanted to believe, indications of German preparations for an attack were explained away by the Allies or simply discounted.

7. Garthoff, Raymond L. *Soviet Military Doctrine*. Glencoe, IL: Free Press, 1953.

Chapter 16, entitled "Deception, Surprise, and Security," describes the place of deception in Soviet military doctrine. Passages on deception in Soviet field regulations and other publications are quoted. Examples of successful Soviet deception operations during World War II are presented.

8. Gooch, John, and Amos Perlmutter, eds. *Military Deception and Strategic Surprise*. Totowa, NJ: Frank Cass and Co., 1982.

The six essays in this book deal primarily with the theory of deception and strategic-level deception. They present a good picture of the dynamics of deception and the potential benefits

of deception. Examples of operational-level deception are mentioned in some of the essays to illustrate certain points.

9. Montagu, Ewen. *The Man Who Never Was*. Philadelphia: J. P. Lippincott Co., 1954.

This book describes "Operation Mincemeat," the dumping of the body of a fictitious British officer into the sea off Spain as part of the deception plan for the invasion of Sicily. The author originated the idea and helped carry it out, and his detailed description of these events gives a special insight into how deception operations are planned and implemented. The analysis of German reactions to the deception presents useful lessons in the psychology of deception. This deception operation, which caused the Germans to redeploy significant forces away from Sicily, stands as a classic example of a wartime ruse.

10. Owen, David. *Battle of Wits: A History of Psychology and Deception in Modern Warfare*. London: Leo Cooper, 1978.

This book discusses deception and psychological warfare as practiced in the twentieth century. Examples are drawn primarily from World War II, but there are also examples from World War I, the Korean War, the Arab-Israeli wars, the brush-fire wars of the 1950s and 1960s, and the Vietnam War. The need to outthink the enemy is stressed, and deception is shown to be an important way to accomplish this goal. A large portion of this book is devoted to the use of intelligence agents and strategic deception, but the role of deception in such military operations as the Battle of El Alamein and the Normandy landing is also discussed.

11. Perrault, Gilles. *The Secret of D-Day*. Boston: Little, Brown, and Co., 1965.

This book contains one of the best accounts of the deception accompanying the Normandy landings. The detailed description of German reactions to Operation Fortitude—the Allied deception effort—shows what it takes for a deception operation to be successful.

12. *The Tangled Web*. By the editors of the *Army Times*. Washington, DC: Robert B. Luce, 1963.

This book consists of fifteen chapters, each one a description of a successful deception operation. The greatest number of ex-

amples are from World War II, but there are also examples from World War I, the Philippine pacification campaign, and the Civil War.

13. Vigor, P. H. *Soviet Blitzkrieg Theory*. New York: St. Martin's Press, 1983.

This book is primarily an examination of how Soviet doctrinal thought on using conventional forces in the nuclear age has developed. The key to using conventional forces in this new era is the ability of forces to achieve a rapid and decisive victory. Surprise is one essential element in achieving such a victory, and surprise is, in turn, dependent in large measure upon successful deception operations. This book discusses the high value placed upon deception by the Soviet Army. Special attention is given to the use of deception by Soviet forces during the Manchurian campaign of August 1945.

14. Whaley, Barton. *Codeword Barbarossa*. Cambridge, MA: MIT Press, 1973.

This is an excellent, thoroughly documented study of the reasons why Germany had complete strategic surprise when it suddenly attacked the Soviet Union on 22 June 1941. Whaley examines the successful German deception effort and develops a new explanation for understanding why Stalin was fooled by Hitler. He shows how disinformation reduced ambiguity in Stalin's mind, making him more certain, yet wrong, about German intentions.

15. ———. *Stratagem: Deception and Surprise in War*. Cambridge, MA: MIT, 1969. CARL N17417.4 A-E.

This exhaustive, major study begins with a general description of deception theory and the practice of deception in warfare. It then presents analyses of 168 battles from 16 wars during the years 1914–68 to show how important deception operations are at both the strategic and the tactical level. The author concludes that at both levels the use of deception is more than ten times more likely to result in surprise than is reliance on cover alone.

Part B—Articles

16. Brown, J. Tuck, Col. "Countersurveillance." *Field Artillery* 48 (May-June 1980):44—47.

This article examines cover and deception from the perspective of countersurveillance. Particular attention is given to the use of smoke, decoys, and disguises. The author advocates greater Army use of large-area smoke screens.

17. Croizat, V. J., Col. "Mislead the Enemy." *Marine Corps Gazette* 43 (October 1959):52—53.

Colonel Croizat, USMC, believes that deception, properly used, may well be the decisive element for determining victory or defeat on the battlefield. He advocates that the commanders of all units, from the largest to the smallest, become deception conscious and also intelligence conscious, because in his opinion, accurate intelligence on the enemy is absolutely crucial for conducting a successful deception operation.

18. Dashevskiy, Ya, Lt. Gen. "Camouflage, Concealment, Deception: Organization and Execution." *USSR Report: Military Affairs no. 1525* (24 July 1980):46—56. Translated by the Foreign Broadcast Information Service from the Russian article entitled "Organizing and Executing Operational Camouflage, Concealment and Deception" in *Voenno-istoricheskii zhurnal* [Military history journal], (April 1980):46—52.

This article emphasizes the importance of centralized planning and control in operations that involve operational camouflage, concealment, and deception. Examples from World War II show the Soviet Army's use of operational camouflage, concealment, and deception in a variety of situations. The author notes that successful operational camouflage, concealment, and deception contributed to many victories and states that this type of operational support is still important in modern-day operations.

19. Deutsch, Harold C. "The Influence of ULTRA on World War II." *Parameters* (December 1978):2—15.

This article is primarily a general description of Ultra's tremendous contribution to the Allied war effort. However, Professor Deutsch does discuss Ultra's role in deception operations, noting that it crippled most German deception efforts and allowed the Allies to measure the success of their own deception

operations. The most notable example of Ultra's use in this way occurred as part of the deception plan implemented for Operation Overlord.

20. Estler, Elizabeth D., Capt. "Tactical Deception in Today's Army." *Military Intelligence* 9 (October-December 1983): 24-27.

This is a good overview of the requirements necessary to implement a successful deception operation. A sample deception planning chart is included. The author takes the position that deception should be incorporated into every tactical organization, and that unit training must include deception training.

21. Grodecki, Thomas S., Maj. "Dummy Doctrine." *Field Artillery Journal* 53 (January-February 1985):39.

This brief article points to the need for a deception program to protect the artillery. The author advocates greater use of dummy positions.

22. Hand, Robert P., Lt. Col. "Deception Planning." *Military Review* 47 (September 1967):44-48.

This article examines deception planning and deception operations and discusses the responsibilities of G2 and G3 in these types of activities. Lieutenant Colonel Hand concludes that the G2 must be the principal staff officer in cover and deception operations, because intelligence on the enemy is the crucial factor in deciding whether or not to initiate or continue such operations.

23. Hargreaves, Reginald, Maj. "For to Deceive." *Marine Corps Gazette* 43 (January 1959):36-43.

Major Hargreaves presents numerous historical examples of how camouflage, smoke, "stage armies," and "stage weapons" have been used to deceive an opposing army. The benefits of using guile in military operations are clearly shown.

24. Heiman, Leo. "War in the Middle East: An Israeli View." *Military Review* 9 (September 1967):56-66.

This discussion of the 1967 Six-Day War contains a brief account of the Israeli "fog of battle" deception operation. A simple, yet effective, part of this operation was the concealment of the fact that Israel had captured certain towns and strategic

areas. As Arab units entered these areas, they were surprised and easily captured.

25. Hobar, Basil J., Col. "The Ardennes 1944: Intelligence Failure or Deception Success?" *Military Intelligence* 10 (October-December 1984):8-16.

Colonel Hobar concludes that there was an intelligence failure on the part of the Allies in the Ardennes, but he gives credit for the failure to the Germans. Their well-conceived and well-executed deception operation, with its extraordinarily tight security measures, fooled the Allies. German success was helped by the fact that their deception story fit Allied expectations and was therefore readily believed.

26. James, Scott. "Maskirovka: Are the Russians Taking Us Down the Garden Path?" *Defense Electronics* 12 (August 1980):43-44+.

Soviet use of electronic warfare, camouflage, and decoy techniques is reviewed. The purpose is to indicate that despite an improvement in battlefield monitoring capabilities, deception can still be effective and remains an important part of Soviet planning for military operations.

27. Jones, T. T., Lt. Col. "The Genesis of Military River Operations: Alexander the Great at the Hydaspes River." *Military Engineer* 56 (November-December 1964):424-26.

Lieutenant Colonel Jones describes the important role of deception in this successful river crossing, which is held up as a model for river-crossing operations today. The deception portion of the operation is compared to the deception planning that was part of Operation Overlord in 1944.

28. Khan, Muhammad Nagi, Maj. "Surprise and Deception." *Military Review* 38 (March 1959):100-104. Digested from *The Owl* (Pakistan), December 1957.

This article discusses the importance of surprise in war and the ways in which deception can contribute to achieving surprise. General descriptions of some successful deception operations are presented.

29. Kobrin, N., Col. "Operational Deception." *Soviet Military Review* 4 (April 1981):42-44.

Colonel Kobrin emphasizes the important contribution of deception operations to the Soviet victory in World War II. The

deception plan that was carried out as part of the Lvov-Sandomir operation in July 1944 is described in some detail. Many Soviet deception techniques are mentioned.

30. Love, Edmund G. "Deception on the Shuri Line (Okinawa)." *Infantry* 73 (July-August 1983):14—20.

This article describes a successful deception operation conceived by a battalion commander and carried out at the battalion level with the approval of higher authority. The Japanese defenders were taken completely by surprise and a significant terrain feature on the Shuri line was captured by U.S. forces.

31. Matoy, George C., Capt. "Breakout." *Infantry* 72 (March-April 1982):26—29.

The successful use of deception by the German 1st Panzer Division to break through a Soviet encirclement in December 1941 is described. The need for deception and secrecy in break-out operations is discussed.

32. Meadows, Lee A. "An Overview: Electronic Countermeasure Technology." *Signal* 32 (March 1978):34—38+.

This article discusses various weapons that rely upon electromagnetic radiation for guidance and the electronic countermeasures that can render them ineffective. What emerges is a picture of deception needs on the electronic battlefield.

33. Mel'nikov, P., Col. Gen. "Wartime Experience in Camouflage, Concealment and Deception." *USSR Report: Military Affairs* no. 1707 (20 September 1982):22—33. JPRS no. 81805. Translated by the Foreign Broadcast Information Service from the Russian article entitled, "Operational Camouflage, Concealment, and Deception (Maskirovka)," in *Voенно-istoricheskii zhurnal* [Military history journal], (April 1982):18—26.

Colonel General Mel'nikov, Chief of the M.V. Frunze Military Academy, begins his article by discussing the theoretical roots of operational camouflage, concealment, and deception, which are all combined in Russian in the term *maskirovka*. In the 1920s, military theorists concluded that the most important means of achieving surprise was the carrying out of *maskirovka* operations that were based on the principles of activity, naturalness, diversity, and continuity. This article shows how this theory was put into practice during World War II with ever

greater success. As the war continued, *maskirovka* methods were continually improved and the scale and diversity of *maskirovka* operations steadily increased. For example, there was greater use of smoke, security measures were tightened, troop simulation was expanded, and planning became more comprehensive. Mel'nikov expresses his belief that the Soviet Army's successful use of *maskirovka* during World War II is of current significance under present-day conditions, and he calls for the continued imaginative application of operational camouflage, concealment, and deception.

34. Olsen, Frank H. "Great Hoaxes." *Infantry* 59 (November-December 1969):44-47.

This article briefly describes several successful deception operations that saved some armies from defeat and brought victory to others.

35. Raugh, Harold E., Capt. "The Haversack Ruse." *Military Intelligence* 10 (January-March 1984):11-14.

This short article describes a successful ruse used by the British in the Third Battle of Gaza (October-November 1917). A haversack containing purported British plans for another frontal assault on Gaza was "inadvertently" dropped where Turkish soldiers could retrieve it. Eventually, the plans reached the German general in command of Turkish forces. Because these plans fit in so well with his beliefs about British intentions, he accepted them as true and arranged his defenses accordingly. When the British carried out a flanking attack, they achieved surprise and won a major victory.

36. Riccardelli, Richard F., Capt. "Camouflage and Deception—Soviet Style." *Military Review* 59 (February 1979):24-32.

Captain Riccardelli notes that current Soviet doctrine calls for the extensive use of camouflage techniques and deception ploys in all operations. This article describes Soviet use of smoke, electronic camouflage and deception, sonic and olfactory deception, concealment, and dummy positions. The Soviet use of darkness to cover movement and to create false impressions is discussed. The conclusion of the article is that great care must be exercised in making judgments about Soviet intentions because they are very good at creating false impressions.

37. Sekulich, Miloje. "Deception in War." *Military Review* 38 (November 1958):92-97. Translated and digested from *Vojno Delo* (Yugoslavia), nos. 4-5, 1957.

This article is a good general summary of the various elements that are part of deception—including secrecy, security, demonstration attacks, and feints. Historical examples of successful deception operations are presented.

38. Stevens, Jennie A., and Henry S. Marsh. "Surprise and Deception in Soviet Military Thought." Part 1: *Military Review* 62 (June 1982):2—11; part 2: *Military Review* 62 (July 1982):24—35.

This two-part article provides a good review of Soviet thinking on surprise and deception at the tactical, operational, and strategic levels. Part 1 focuses on surprise, while part 2 concentrates on deception. Soviet use of concealment, imitation, demonstration maneuvers, and disinformation is examined in detail. The difficulty of carrying out a deception operation is also discussed.

39. Szkoda, W. E., Capt. "Camouflage and Deception." *Armor* 70 (September-October 1961):48—53.

Captain Szkoda discusses deception techniques that are especially relevant to tanks. The successful British deception effort at the Battle of El Alamein is examined in some detail.

40. Westenberger, Paul H., Maj. "Beware the Russian Ruse." *Marine Corps Gazette* 48 (January 1964):27—31.

This article describes many acts of deception carried out by the Soviet Army in World War II, including the use of Russian units dressed in German uniforms. The importance of deception within the Soviet Army is illustrated.

41. Ziemke, Earl F. "Operation Kreml: Deception, Strategy, and the Fortunes of War." *Parameters* 9 (March 1979):72—83.

This article discusses the possible influence the German deception plan, Kreml, may have had on Eastern Front campaigns during the summer of 1942. Kreml was intended to make the Russians believe that the main German thrust during the 1942 campaign season would be directed at Moscow. The great Soviet strategic retreat on the southern flank during the summer of 1942 is seen as a possible response to this German deception plan.

Part C—Government Reports, Manuals, and Studies

42. Chattin, James W., Lt. Col. "Battles for Cities on the Eastern Front During World War II." Student study project. U.S. Army Command and General Staff College, Fort Leavenworth, KS, 1981. DTIC ADB 064180L.

In this paper, the author discusses the Soviet defense of the cities of Odessa, Brest-Litovsk, and Sevastopol in 1941. Noteworthy information on the defensive use of smoke for obscuration in Odessa and the simulation of three nonexistent divisions in Sevastopol is included.

43. Dignault, D. W., Maj., et al. "Cover and Deception in the Six-Day War." Student paper. U.S. Army Command and General Staff College, Fort Leavenworth, KS, March 1974. CARL N8224.1340.

This group research paper was prepared by students in electronic warfare at the USACGSC. Israeli tactical cover and deception activities during the Six-Day War are examined, and the contribution of these activities to Israeli success on the battlefield is analyzed.

44. Eaton, Harmon L., Maj. "The Soviet Invasion of Manchuria, 1945: An Analysis of the Element of Surprise." MMAS thesis. U.S. Army Command and General Staff College, Fort Leavenworth, KS, 1976. DTIC ADA 030143.

This study shows how the Soviets achieved strategic, operational, and tactical surprise against the Japanese in 1945. The author discusses the deception measures used at each echelon and evaluates the influence of surprise on the outcome of the campaign. This is an interesting study, because the Manchurian campaign carried out by Soviet forces is one of the finest historical examples of how an integrated, comprehensive deception plan contributed to success at all three levels of war.

45. Glantz, David L., Lt. Col. *August Storm: The Soviet 1945 Strategic Offensive in Manchuria*. Leavenworth Papers no. 7. Fort Leavenworth, KS: Combat Studies Institute, U.S. Army Command and General Staff College, 1983.

See annotation presented below.

46. _____. *August Storm: Soviet Tactical and Operational Combat in Manchuria, 1945*. Leavenworth Papers no. 8. Fort

Leavenworth, KS: Combat Studies Institute, U.S. Army Command and General Staff College, 1983.

These two volumes form the definitive English-language source on the Soviet Manchurian campaign of 1945, one of the most remarkable operations in World War II. Lieutenant Colonel Glantz frequently refers to the use of deception by Soviet forces, including false radio nets, camouflaged road nets, underground assembly areas, dummy defensive positions, and camouflaged stockpiles. These studies show how deception measures varied from front to front and from unit to unit, depending to a great extent on mission, enemy, terrain, troops, and time.

47. Hacker, Charles L., Maj. "Deception, Countersurveillance, and the AirLand Battle." MMAS thesis. U.S. Army Command and General Staff College, Fort Leavenworth, KS, 1985.

This study examines the role that deception can play in gaining and maintaining the initiative in the AirLand Battle. The fundamentals of deception operations and the deception doctrine of both the U.S. and Soviet Armies are examined. Historical examples of deception are presented. The study concludes that the U.S. Army needs to reevaluate its deception doctrine and must place greater emphasis on the use of deception at the operational level of war.

48. Kronman, Mark. "The Deceptive Practices of the 23rd Headquarters, Special Troops During World War II." Aberdeen Proving Ground, MD: Tactical Operations Analysis Office, 1978.

The 23d Headquarters Special Troops (23d HQ) was the only U.S. Army unit specifically trained and equipped during World War II to carry out tactical deception. This document describes and evaluates each of the twenty-one deception operations carried out by this unit in the European theater between June 1944 and March 1945. The use of deception in various tactical situations is analyzed and lessons learned are presented. The experience of 23d HQ shows the need for close coordination between deception specialists and all real troops involved in a deception operation, the need for thorough planning down to the last detail, and the need for a deception operation to appear completely authentic.

49. Matsulenko, V. A., Maj. Gen. *Operational Camouflage of Troops*. Moscow: USSR Ministry of Defense, 1975. Trans-

lated into English by SCITRAN, Santa Barbara, CA.
DTIC ADB 020935L.

Using documents from the archives of the USSR Ministry of Defense, General Matsulenko analyzes the use of camouflage by Soviet forces at the operational level of war during World War II. His focus, therefore, is on Soviet deception plans by fronts and armies. Useful maps and diagrams are provided in each chapter. Several appendices contain detailed data for a number of operations in which smoke, radio deception, mock-ups, decoys, and other means of deception were used. This is an important work for those interested in deception.

50. Shimanskiy, A., Col. "About the Achievement of Strategic Surprise in the Preparation for the 1944 Summer-Fall Campaign." *Joint Publications Research Service. Soviet Military Translations*, no. 467 (20 August 1968):1-15. Translated from *Voyenno-istoricheskii zhurnal* [Military history journal] no. 6, 1968.

Colonel Shimanskiy writes about how the Soviet Army was able to deceive the Germans as to troop deployment prior to the launching of their 1944 summer-fall campaign. All of the components of the major deception operation that was carried

51. Shramm, Percy E. *The Preparations for the German Offensive in the Ardennes (Sep. to 16 Dec. 1944)*. [Foreign Military Studies MS no. A-862. U.S. Army Europe, Historical Division, 1946]. CARL N16253.1.

This lengthy, detailed study of German preparations for the Ardennes offensive contains a seven-page section (pp. 223-30) on the role of deception in the operation. The Germans were extremely security conscious, developed a plausible deception cover, and practiced good camouflage control. As a result, they effectively concealed their massive preparations for the offensive and caught the Allies by surprise.

52. Slepenev, D. K., et al. *Army Operations*. Moscow: USSR Ministry of Defense, 1977. Machine translated by the Translation Division, Foreign Technology Division, Wright-Patterson AFB, Ohio. DTIC ADB 070776.

This Soviet publication describes over forty different factors that influence army-level operations. Several of the chapters mention deception efforts, such as the use of smoke or concealment in assembly areas.

out, including the simulation of notional forces, the concealment of actual units, and the implementation of strict security measures, are discussed. The author goes into some detail in describing specific deception techniques used by the Soviets. This article presents a clear picture of the high value placed on deception by the Soviet Army and the thoroughness with which the Soviets approach deception operations. Numerous quotes from German sources show the high degree of success achieved by the Soviets in this deception effort. The German remarks also show that they helped fool themselves. They willingly accepted the Soviet deception story because it fit their own preconceptions of what was likely to happen.

53. U.S. Army. Combat Development Command. "Tactical Cover and Deception." Alexandria, VA: Concepts and Force Design Group, 1972. CARL N19646.Z.

This report presents the results of a study into the status of tactical cover and deception in the U.S. Army as of 1972. General doctrinal guidelines for cover and deception operations during the period 1972—77 are presented. Materiel requirements are examined and an organization for cover and deception during wartime is proposed.

54. U.S. Army. Combined Arms Combat Developments Activity. Field Circular 90—2, *Deception Operations Planning Guide*. Fort Leavenworth, KS, 1985.

This document augments Field Manual 90—2, *Tactical Deception*, presenting more detailed practical guidance on how to plan and implement deception operations at the corps level and below. Chapter 1 reviews the fundamentals of deception. Chapter 2 discusses deception planning, with special emphasis on staff organization and staff responsibilities in each planning phase. There are several appendices, including a deception checklist, a deception planning work sheet, deception training examples, a sample deception plan, a list of commonly used acronyms and their full forms, and a glossary of key terms.

55. U.S. Army. Command and General Staff College. Reference Book 31—40, *Techniques for Deception*. Fort Leavenworth, KS, 1976. CARL RB 31—40.

Deception concepts, the role of intelligence in deception, and deception tools are discussed in this good review of deception fundamentals. The use of deception in the offense, in the de-

fense, and in other tactical operations is examined. In order to assist deception planners in developing deception schemes, numerous ideas for deception operations and historical examples of successful deception are presented. A sample deception plan is presented in an appendix.

56. U.S. Army. Far Eastern Command. Military Intelligence Section. "A Brief History of the G-2 Section, GHQ, SWPA and Affiliated Units." Tokyo, Japan, 1948. CARL N16262-A.

On pages 25—28 of this item, there is a section entitled "Role of G-2 in the Hollandia Operations: A Deception Plan." The section describes the contribution of deception operations to the successful amphibious assault at Hollandia (now Djajapura), New Guinea. Aerial reconnaissance, feints, and dummy equipment were used to mislead the Japanese into thinking that an Allied landing at Hollandia was very unlikely.

57. U.S. Army. Office of the Chief Signal Officer. Personnel and Training Service. "Sonic Warfare: The Sonic Company—Organization, Equipment, Employment." Pine Camp, NY: Army Experimental Station, 1944. CARL N9425.3.

This report describes the purpose and nature of sonic warfare and the organization of the sonic company. The successful deception operation of the first sonic unit, which was carried out on the Brest peninsula during 23—25 August 1944, is mentioned. This operation caused the Germans to make a major diversion of antitank defenses to meet a nonexistent armored threat.

58. U.S. Army. 12th Army Group. "Cover and Deception Report ETO, Exhibit '8.' Tactical Operations 'A'—'E.'" CARL N11598.5 (A—E).

This item contains reports of five deception operations undertaken by 23d Headquarters Special Troops in support of 12th Army Group operations in France during the summer of 1944. Prepared by 23d Headquarters Special Troops for the commanding general of 12th Army Group and the commanding general of Supreme Headquarters, Allied Expeditionary Force, these five reports contain detailed descriptions of deception plan objectives, plan implementation, and the results achieved. These original documents provide an excellent picture of U.S. Army deception operations in the European Theater of Operations.

59. U.S. Army Air Force. Camouflage School. *Operational Deception*. March Field, CA, 1943. CARL MF N2366A.

This textbook from the Army Air Force Camouflage School reviews the basic components of deception operations. There are specific sections on operational planning, staff procedures, the means of deception, and enemy intelligence. Historical examples of successful deception operations, mostly from World War II, are presented in an appendix.

60. U.S. Army Ground Forces. Army War College. "German Methods of Legitimate Deception." Washington, DC, 1944. CARL N4910.

This item is a two-page listing of thirty-two types of tactical deception used by the German Army in World War II.

61. U.S. Army Security Agency. "Verbatim Extracts from the Official History of the 23d Headquarters Special Troops." Arlington, VA, n.d. CARL N17272.62A.

This document summarizes the deception operations carried out by the 23d Headquarters Special Troops during the period 1 July 1944 through 24 March 1945. Extracts from selected after-action reports describe the variety of methods (including spoof radio, dummy equipment, special effects, and sonic workings) used to deceive the enemy. The contribution of deception operations to U.S. Army operations is shown.

62. U.S. Department of the Army. Army Regulation 525—21, *Tactical Deception (TAC-D) Policy (Including Camouflage, Countersurveillance, and Concealment)*. Washington, DC, 1982.

This regulation sets forth the Army's TAC-D policy, describes the role of TAC-D in combat operations, and identifies objectives and assigns responsibilities for TAC-D. The various Army commands are directed to develop capabilities at corps echelons and below to use TAC-D during day-to-day operations, mobilization, periods of international tension, and war. This means having the ability to hide the real through camouflage, countersurveillance, and concealment and the ability to portray the false through deception. A glossary is included and it defines TAC-D as: "Actions at Corps level or below which mislead the enemy and induce him to do something counter to his interests. It includes manipulating, distorting, or falsifying evidence available to the enemy to ensure security to real plans, operations, or activities."

63. U.S. Department of the Army. Field Manual 90—2, *Tactical Deception*. Washington, DC, 1978.

This manual divides military deception into two levels, strategic and tactical. Tactical deception is defined as short-term actions undertaken by a corps or lower-level unit within the battle area to mislead the enemy and induce him to do something counter to his interests. The five chapters of this manual look at the nature of deception, the means of deception, deception planning, ideas for deception, and deception training. Historical examples of deception are presented throughout the manual and in one of the appendices. Information on how to apply deception to field training exercises, ideas and techniques for electronic deception, and a sample deception plan are contained in other appendices. This manual is devoted primarily to deception at battalion level and below. It does not address deception at the operational level of war.

64. U.S. Department of the Army. Pamphlet no. 20—201, *Military Improvisation During the Russian Campaign*. Washington, DC, 1951.

This short pamphlet was prepared for the U.S. Army by a group of former German generals and general staff officers. It describes combat methods that the Germans improvised to meet the special conditions of the Eastern Front. One section in chapter 6 describes deceptive supply movements.

65. U.S. Department of the Army. Pamphlet no. 20—230, *Russian Combat Methods in World War II*. Washington, DC, 1950.

The information in this pamphlet was gathered from a group of former German generals and general staff corps officers who had extensive experience on the Eastern Front. Chapter 13 discusses camouflage, deception, and propaganda. The Russians are praised for their skill and effectiveness in carrying out camouflage and deception operations. They are noted for their strict camouflage discipline and their use of many deception measures to achieve surprise.

66. U.S. Department of the Army. Office of the Chief of Military History. *Deception and Cover Plans*. [Foreign Military Studies nos. P-044 a—c]. Washington, DC, 1952. CARL N17570.

This item is a collection of three manuscripts on deception. Each one was written by a high-ranking German officer on the

basis of his World War II experiences. The theory and practice of deception are discussed in general terms, and examples of deception operations are presented. The Russians are praised for their frequent and clever use of deception, and it is noted that during 1944 and 1945 many major Russian attacks came as complete surprises to the Germans. Two of the essays contain a section on lessons about deception operations learned during the war.

II. CAMOUFLAGE AND CONCEALMENT

Part A—Books

67. Barkas, Geoffrey. *The Camouflage Story (From Aintree to Alamein)*. London: Cassell and Co., 1952.

The author was director of camouflage with Middle East forces from the time a camouflage organization was established on 1 January 1941 until he was transferred to a camouflage post in the War Office after his brilliant success at Alamein. This book presents the growing role of camouflage and deception in military campaigns in the Middle East during 1941 and 1942. The camouflage techniques used in the deception operation at El Alamein are described in great detail.

68. Beketov, A. A., A. P. Belekoni, and S.G. Chermashentsev. *Ground Troop Concealment*. Moscow: Military Publishing House Ministry of Defense, 1976. Translated from the Russian by SCITRAN, Santa Barbara, CA. DTIC ADB 020936L.

This book, which is intended for officers of the Soviet Ground Forces and military school cadets, is an excellent review of Soviet thinking on the role of camouflage on the modern battlefield. The difficulties created by more advanced means of reconnaissance, the growing number of weapons and other equipment that needs to be concealed, and the increased tempo of battle preparation and combat are discussed. Such developments are seen as making concealment work more important than ever. The fundamentals of tactical concealment (cover, simulation, etc.), camouflage techniques (painting, screening, decoys, smoke, etc.), and camouflage equipment are described. Concealment measures to be used in the advance, the defense, when on the march, and when deployed in place are examined. There is even a chapter devoted primarily to discussing U.S. reconnaissance capabilities. Successful concealment operations from World War II are used as examples.

69. Klose, K., and H. Hartman. *The Use of Smoke Agents*. Berlin, East Germany: Deutscher Militärverlag, 1964. Translated from the German by the U.S. Army Foreign Science and Technology Center, Washington, DC. DTIC AD 469769.

This thorough examination of the use of smoke agents begins with a historical review of the use of smoke in military

operations. Subsequent sections discuss the physical characteristics of smoke, smoke-generating substances, equipment and means for generating smoke, the use of smoke agents by naval forces, the principles of the use of smoke in ground combat, and calculations for the use of smoke. The material is often quite detailed and technical. This is a good source on the subject of smoke.

70. Willemer, Wilhelm, Oberst, et al. *Camouflage*. U.S. Army Europe, Historical Division, 1953. CARL N17500.20.

This thorough study discusses the importance of camouflage and its use in virtually every type of military situation. An appendix contains a description of how the *Panzer Lehr* Division incorporated camouflage into its operations in Normandy during June and July 1944. In the face of unchallenged Allied air superiority, the German Army used camouflage to survive, but its mobility and effective firepower were seriously diminished.

Part B—Articles

71. Auten, Chesley, Capt., and Douglas O. Jones, WO1. "The Mission is Subdued." *U.S. Army Aviation Digest* 21 (August 1975):6—9.

This article describes how a helicopter unit camouflaged its positions during a training exercise at Fort Bliss, Texas.

72. Chulanov, A., Lt. Col. "Concealment and Surprise." *Soviet Military Review* (January 1981):29—30.

This brief account of a tactical training exercise presents a lesson in the use of camouflage to conceal forces and achieve surprise in the attack.

73. "Communist Camouflage and Deception." *Air University Quarterly* 6 (Spring 1953):90—100.

This article discusses the use of camouflage and deception by communist forces during the Korean War. Many aerial photographs are presented to illustrate a great variety of camouflage techniques.

74. Deen, Grady, M. Sgt. "Camouflage." *Infantry* 64 (November-December 1974):50—51.

Master Sergeant Deen is concerned about the deterioration of Army training in the use of camouflage. He believes that camouflage should be recognized as an essential element in all military operations and be given command emphasis at all levels of the Army. Camouflage techniques are discussed.

75. DeWitt, B. B., Maj. "Camouflage: A Neglected Art." *Marine Corps Gazette* 45 (December 1961):46—50.

Major DeWitt considers good intelligence to be the key to successful operations, and he wants U.S. forces to do more to keep the enemy from having good intelligence. In his view, more attention must be paid to concealment and especially to what he calls deceptive camouflage, i.e., the use of dummies and decoys to deceive the enemy. This article is a good review of the value of camouflage at the tactical level.

76. Ellsén, J., Commander, and J. Jarnekull. "To See, But Not to Be Seen." *Armada International* 6 (May-June 1982): 64+.

Camouflage techniques that can counter reconnaissance carried out by radar, infrared sensors, television, and lasers are

described in this article. The authors stress the need to utilize terrain effectively when camouflaging. They also point out the value of dummy equipment and the importance of strict camouflage discipline. Numerous photos illustrate the points being made by the authors.

77. Emerson, William K., Maj. "More on Camouflage." *Armor* 87 (May-June 1978):28—29.

Major Emerson describes measures adopted in 1975 to camouflage the M-60A1 tank. These include foliage brackets, fender nets, and headlight-taillight glare covers.

78. Felter, Jesse E., Lt. Col., and Capt. Leland L. Huber. "Smoke—Who Needs It?" *U.S. Army Aviation Digest* 21 (September 1975):1, 26—27.

This article briefly reviews the use of smoke in previous wars and makes the point that smoke is still useful today. The benefits of having smoke-generating helicopters on the battlefield are described.

79. Forbes, John M., Capt. "Supply Base Camouflage." *Army Logistician* 8 (May-June 1976):20—22.

The careful selection of supply areas, the imaginative creation of mock supply dumps, and strict camouflage discipline are presented as useful ways to counter enemy surveillance efforts.

80. Harvey, David. "Camouflage: Survival Costume." *Defense and Foreign Affairs* (October 1979):15—17+.

The author states that camouflage does not receive appropriate attention at the doctrinal level in the U.S. Army. Current camouflage research and development work in several nations is examined, and the United States is said to have much to learn in this area from such countries as Britain, West Germany, and Sweden. This article also describes the contribution that decoys can make to battlefield survival.

81. Hawkins, Dave, Capt. "The Hawk and the Clamshell." *Air Defense Magazine* (July-September 1976):18—22.

This article describes methods used to camouflage a Hawk battery during an exercise at Fort Bliss, Texas. Camouflaging equipment and procedures are discussed in detail. This is a follow-on article to an article titled "The Bushmasters" that

was written by Captain Henry A. Zimon and published in the October-December 1975 issue of *Air Defense Magazine*.

82. Knight, C. G., Maj. "Camouflage: The Gentle Weapon." *Army* 25 (February 1975):23—28.

The U.S. Army is criticized for its lack of interest in camouflage during the quarter century that includes both the Korean War and the Vietnam War. The author notes that the United States has successfully developed highly efficient battlefield observation and surveillance devices, and he advocates adopting a "systems" approach to countersurveillance in general and camouflage in particular. This article contains a general overview of what is required for effective camouflage and a review of some recent research developments.

83. Levin, V., Col., and V. Kolchevsky, Col. "Engineer Camouflage." *Soviet Military Review* (December 1970):34—35.

Camouflage techniques used to counter visual reconnaissance (ground and air) are reviewed. These techniques include the use of paint, vertical and lateral screens, flat-top nets, and camouflage covers. In cases where engineer works cannot be concealed, it is recommended that efforts be directed toward deceiving the enemy as to the number of such works and the disposition of units within them. The usefulness of decoys, dummies, and smoke screens is discussed, and the need for systematic control over camouflage work is stressed. Commanders are advised to check camouflage from the air as well as from the ground.

84. Lewis, L. Kirk, Capt. "Smoke." *Field Artillery Journal* 43 (September-October 1975):44—45+.

The usefulness of smoke on the battlefield is said to be as great today as it ever was. The author calls for new doctrine that will allow the most effective use of field artillery-delivered smoke.

85. Liebeg, Fritz W., Capt. "Tactics for Employment of Hawk Decoys." *Air Defense Magazine* (October-December 1975):5—7.

This article describes how to establish decoy Hawk missile positions and what can be done to make these positions more realistic.

86. Miller, S. W., 1st Lt. "Camouflage and Deception." *Armor* 84 (November-December 1975):15—20.

Lieutenant Miller provides a general discussion of the value of camouflage and deception and describes developments in four major areas: camouflage pattern painting, camouflage nets and disrupters, smoke and aerosol systems, and decoys.

87. Miller, S. W., Capt. "Camouflage and Survival." *Infantry* 69 (January-February 1979):20—24.

Captain Miller advocates developing camouflage consciousness. The use of paint, smoke, shape disrupters, and decoys to increase the chances for battlefield survivability is discussed.

88. "Modern Camouflage Techniques from Sweden—the Barracuda System." *International Defense Review* 7 (April 1974):198—203.

This article describes the camouflage system (primarily nets) developed by the Swedish company, Barracadaverken AB. The operation of modern sensors and the camouflage characteristics needed to defeat them are discussed. The use of decoy equipment to confuse modern reconnaissance systems is also mentioned. This article takes the position that although constant movement may be used to confuse enemy observers, the skillful use of camouflage is the only practical way to conceal large formations or installations.

89. Narayanan, G., Maj. "Camouflage in Battle." *Military Review* 37 (July 1957):97—100. Digested from *The Journal of the Institution of Military Engineers* (India), April 1955.

Major Narayanan sees camouflage as having two sides, namely, concealment and display. He feels that concealment has long been properly recognized, but that the use of display to achieve surprise is not well enough known. Most of this article is devoted to the use of dummies or decoys to mislead the enemy. Camouflage by smoke is also discussed. Historical examples showing the successful use of camouflage by both the offense and the defense are presented.

90. Peterson, Gayle D. "Now You See It—Now You Don't." *Army* 29 (April 1979):36—39.

Camouflage research being carried out at the U.S. Army Mobility Equipment Research and Development Command, Fort Belvoir, Virginia, is described in general terms.

91. Smith, Philip R. Jr. "Now You See It—Now You Don't." *Army Digest* 26 (January 1971):57—60.

This article reviews the place of camouflage in war. The U.S. Army's historical tendency to disregard the use of camouflage is mentioned, and the hope is expressed that the experiences of the Vietnam War will increase interest in camouflage.

92. Spanier, Tom. "Camouflage in the Electronic Battlefield." *Defense and Foreign Affairs Digest* (October 1977): 38—40.

This article is in the form of an interview with Tom Spanier, a representative of the Sullivan Company of San Francisco. This company is one of the oldest makers of camouflage in the United States and has had U.S. Army contracts to design and develop camouflage against modern sensors. Mr. Spanier discusses camouflage in general terms and also in terms of his company's products. He believes that camouflage can be effective on the electronic battlefield and will greatly improve the survivability of forces that use it.

93. Sylvester, A. T. "Camouflage for Battle Survival." *National Defense* 63 (July-August 1978):48—49+.

The importance of camouflage and the difficulty of camouflaging weapons from a growing number of increasingly sensitive sensors are discussed in this article. The U.S. Army's use of pattern painting and camouflage screens is described.

94. Yelshin, N., Lt. Col. "Camouflage in the Desert." *Soviet Military Review* 8 (August 1975):18—19.

In the course of describing how to camouflage forces in a desert, this article presents a clear picture of the importance placed on camouflage and deception by the Soviet Army. It is stated that World War II experiences show that an expenditure of effort on camouflage will be returned a hundredfold. The camouflage techniques described by the author show great care and attention to detail.

95. Zimon, Henry A., Capt. "The Bushmasters." *Air Defense Magazine* (October-December 1975):8—11.

An exercise at Ft. Bliss, Texas, in which a Hawk battery was successfully concealed from visual and electronic surveillance is described. Techniques of desert camouflage are discussed.

Part C—Government Reports, Manuals, and Studies

96. Allied Air Forces, Southwest Pacific Area. Directorate of Intelligence. Central Interpretation Unit. "Objective Folder No. 65." Subject: Japanese Camouflage and Deceptive Methods in the Southwest Pacific Area, 1943. CARL N3386.

The Japanese are recognized as masters at camouflaging individual soldiers and weapons positions, but their efforts at camouflaging buildings and ground installations are criticized. Here the Japanese often showed poor camouflage discipline and left dummies and decoys in the same location week after week, thus making them ineffective.

97. U.S. Army. Chemical Corps. Historical Section. *Smoke Generator Operations in the Mediterranean and European Theaters of Operation*. [1948]. CARL R16633.1.

This work presents the history of large-area screening activities undertaken by chemical smoke generator companies in support of military operations in the Mediterranean Theater of Operations and the European Theater of Operations. The development of smoke-generating equipment and the evolution of smoke screen doctrine is described. The contribution of large smoke screens to the success of military operations is amply illustrated.

98. U.S. Army. Far Eastern Command. Military Intelligence Section. "Chinese Communist Reference Manual for Field Fortifications." [Tokyo, Japan], 1951. CARL R17349.

This document is a translated copy of a Chinese Communist manual entitled "Reference Manual for Field Fortifications" that was published by the Manchurian Military Publishing Agency in January 1948. It is very detailed, with many diagrams, tables, and illustrations. Information contained in this manual provides an insight into the types of field fortifications used by Chinese forces and certain methods of camouflage and concealment that proved effective in the Korean War.

99. U.S. Army. Intelligence Division. "Providing Camouflage in Assault Operations." Translated from the original Russian by the U.S. Army Intelligence Division. Washington, DC, 1949. CARL N16582.178-C.

This document describes the successful use of deception by the Soviet Army during a military operation on the Northwest Front in July 1942. The actual deception plan is presented. This gives a clear picture of how the Soviets organized their forces and allocated resources to conceal the true, display the false, and achieve surprise on the battlefield.

100. U.S. Army. Mobility Equipment Research and Development Center. "United States Army Camouflage Master Plan (Coordination Draft)." Fort Belvoir, VA, 1974. CARL N17995.460.

This camouflage master plan was developed to improve U.S. Army camouflage capabilities and promote the integration of camouflage into military operations. It establishes guidance, policies, and responsibilities in the area of camouflage and, in doing so, presents a picture of what needs to be done to camouflage effectively on the modern battlefield. The U.S. Army's use of camouflage in World War II, Korea, and Vietnam is briefly reviewed.

101. U.S. Army. Office of the Chief of Engineers. Engineer Intelligence Division. "Enemy Camouflage Practices in Korea." Washington, DC. CARL R17055.10.

Camouflage is described as "the enemy's most effective weapon of defense in Korea." Concealment and deception techniques used by North Korean and Chinese forces as a means to counter aerial attacks are presented.

102. U.S. Army Service Forces. "Observation on Camouflage—North Burma." Washington, DC, 1945. CARL N8442.

A camouflage specialist presents his observations on the use of camouflage by U.S. forces in Burma during the period November 1944—January 1945. The average officer in Burma took camouflage lightly because of the lack of concentrated Japanese air offensive. Some units, however, had excellent camouflage standards with commanding officers and intelligence officers conducting frequent aerial checks. The observer recommends that camouflage receive greater emphasis during unit training.

103. U.S. Defense Intelligence Agency. *Soviet/Warsaw Pact Ground Force Camouflage and Concealment Techniques*. Washington, DC, 1977. CARL N18911.1505.

This work discusses the strong doctrinal emphasis placed on camouflage and concealment by Soviet-Warsaw Pact forces.

Many camouflage and concealment techniques are described, with sections on such topics as light and sound masking, camouflage paint and clothing, artificial camouflage sets and field expedients, smokescreens, and dummy-decoy equipment. The primary focus is on the tactical level.

104. U.S. Department of the Army. Field Manual 5—20, *Camouflage*. Washington, DC, 1968.

This field manual is a comprehensive guide to camouflage. The principles involved in concealing or disguising troops, vehicles, weapons, and field installations are discussed. Many photos and figures are used to illustrate camouflage techniques. This field manual is almost twenty years old, and for that reason, many of the camouflage techniques available today are not described.

105. U.S. Forces, European Theater. General Board. "Smoke Generator Operations and Organization." N.p., 1946. CARL R12896.69.

This report examines the use of smoke in the European theater during World War II and makes recommendations for future smoke generator unit organization and equipment. The General Board expresses its belief that World War II experiences validate the value of smoke operations but is concerned that future developments in radar and infrared sensing may render smoke obsolete.

106. U.S. Navy. Office of the Chief of Naval Operations. Division of Naval Intelligence. Air Intelligence Group. Photo Interpretation Center. *Japanese Camouflage*. Anacostia, DC, U.S. Naval Air Station, n.d.. CARL R14200.

This work is a collection of photographs used to instruct photographic interpreters. The basic methods of camouflage used by the Japanese are illustrated.

107. U.S. War Department. Military Intelligence Division. *The Punch Below the Belt: Japanese Ruses, Deception Tactics, and Antipersonnel Measures*. Washington, DC, 1945. CARL N11077.2.

Japanese use of camouflage and deception is illustrated by numerous photos showing both camouflage techniques for indi-

vidual soldiers, small positions, and fortifications and the construction of dummy weapons and decoy positions. Japanese skill at improvisation using materials available on the spot is discussed.

III. SUBJECT INDEX

This brief, general index is provided to help readers find the items cited in this bibliography that are relevant to their area of interest. Each of the sources in this bibliography is identified by a number that places it in a numerical sequence. Those numbers have been assigned to the various subject categories below to indicate which items discuss which topics. Numbers will sometimes appear under more than one subject heading.

Deception

Historical Examples from World War I and Before: 12, 15, 27, 35.

Nature and Theory: 2, 3, 4, 5, 8, 9, 10, 14, 15, 17, 20, 22, 23, 28, 33, 34, 37, 47, 48, 52, 54, 55, 62, 63, 66.

Operational and Strategic: 1, 2, 3, 4, 9, 10, 11, 12, 14, 15, 19, 24, 29, 33, 44, 47, 48, 49, 51, 66.

Tactical: 15, 16, 17, 20, 21, 22, 24, 31, 32, 39, 43, 44, 47, 48, 53, 60, 61, 63.

British Army: 3, 4, 5, 11, 15, 39, 59, 67.

German Army: 2, 5, 6, 14, 15, 25, 31, 41, 51, 59, 64, 66.

Japanese Army: 15.

Soviet Army: 1, 2, 5, 7, 13, 15, 26, 29, 33, 36, 38, 40, 42, 44, 45, 46, 47, 49, 50, 52, 65, 66.

U.S. Army: 3, 4, 5, 11, 15, 30, 47, 48, 53, 54, 55, 56, 57, 58, 59, 61, 62, 63.

Camouflage and Concealment

Decoys, Dummy Equipment: 16, 21, 34, 67, 76, 79, 80, 83, 88, 89.

Nature and Theory: 59, 67, 68, 70, 73, 82, 83, 86, 87, 89, 91, 92, 93, 100, 104.

Research and Development: 80, 82, 86, 88, 90.

Smoke: 16, 33, 36, 42, 69, 78, 83, 84, 97, 105.

Tactical: 16, 45, 46, 68, 71, 72, 73, 75, 76, 77, 79, 81, 85, 94, 95, 98, 104.

Chinese Army: 73, 98, 101.

German Army: 70.

Japanese Army: 96, 106, 107.

Soviet Army: 1, 33, 36, 38, 45, 46, 49, 50, 65, 68, 72, 83, 94, 99,
103.

U.S. Army: 59, 74, 82, 91, 97, 100, 102, 105.

U.S. Army Command and General Staff College
Fort Leavenworth, Kansas

