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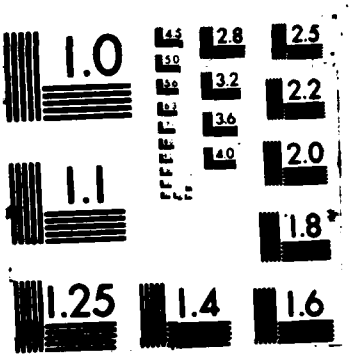
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Soviet-Warsaw Pact Western Theater of Military Operations: Organization and Missions

Michael Sadykiewicz

August 1987

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This Note is part of a project designed to identify key aspects of a prospective Soviet-led Warsaw Pact air-land offensive fought with conventional weapons in Central Europe, and to assess the capabilities of U.S. forces, operating within the NATO context, to identify and attack these targets within critical time periods. The author examines the organization and apparent missions of Soviet-Warsaw Pact forces operating in what the Soviets call the Western theater of military operations. Four scenarios illustrate the concepts of operations that the Warsaw Pact would probably follow during the first five days of a European theater conventional war. The scenarios depict the movements and activities of four representative divisions in the first strategic echelon.

A RAND NOTE

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Soviet-Warsaw Pact Western Theater of Military Operations: Organization and Missions

Michael Sadykiewicz

August 1987

Prepared for
The United States Air Force

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PREFACE

This study was prepared as part of the Project AIR FORCE project, "A 'Critical Time' Evaluation of USAF Intelligence Support for Effective Defense of Central Europe," under the National Security Strategies Program. The project seeks to identify key aspects of a prospective Soviet-led Warsaw Pact air-land offensive fought with conventional weapons in Central Europe. It assesses the capabilities of U.S. forces, operating within the NATO context, to identify and attack these targets within their critical time windows of vulnerability in a timely and effective manner.

The present study examines the organization and apparent missions of Soviet-Warsaw Pact (WP) forces operating in what the Soviets call the Western theater of military operations (TVD). These forces represent the largest and most important peacetime military formation in Europe today. The high command of the Western TVD would have the major responsibility for directing a full-scale theater conventional war against NATO.

The author of the study is a consultant to The RAND Corporation. He served in the Soviet and Polish armies for more than 25 years, joining the Soviet army as a private in 1941. He attended both the Soviet (Voroshilov) and Polish general staff academies and held important command and staff positions in the Polish army, from which he retired in 1967 with the rank of colonel. In this research, the author drew on his own extensive experience and on various Soviet and WP writings on military doctrine and planning, as well as on the Western literature.

The study is intended for Air Force intelligence personnel, planners, and operators involved in preparations for the possible conduct of a conventional war in Europe. Its comprehensive overview of Soviet-Warsaw Pact concepts and capabilities for war in the critical Central Region has been prepared at the unclassified level to take advantage of the author's unique experience and to make the study available to the widest audience possible inside and outside the U.S. Government.

SUMMARY

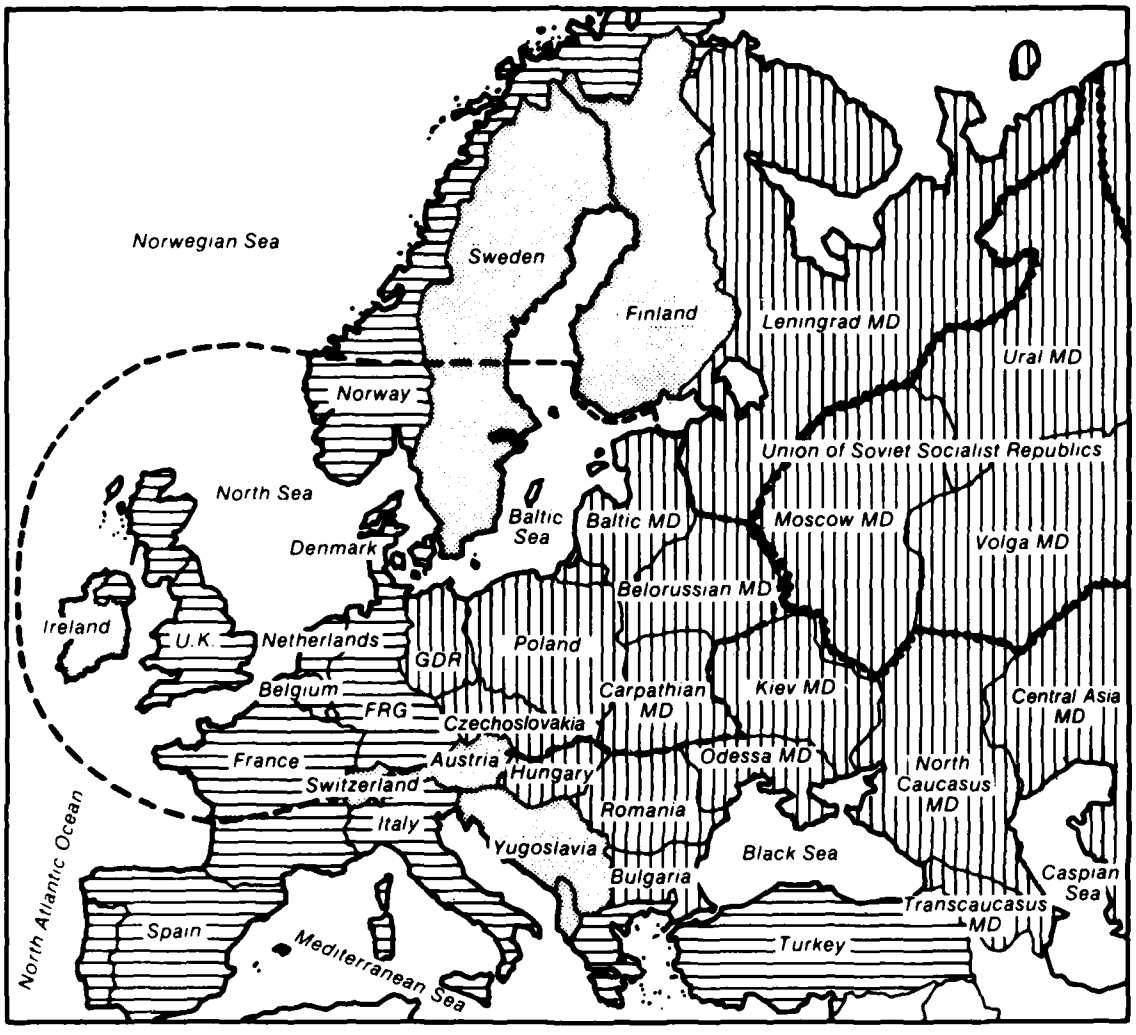
The forces of the Soviet-Warsaw Pact Western theater of military operations (TVD) constitute the largest peacetime concentration of military power in the history of Europe. In the event of a full-scale conventional war with NATO, forces of the Western TVD would probably bear the major responsibility for fighting the Western allied forces.

This study examines the organization and missions of the Western TVD. The research is based largely on the author's extensive professional experience as an officer in both the Soviet and Polish armies from 1941 to 1967, and on the military literature of the USSR, other Warsaw Pact countries, and the West.

PART ONE: ORGANIZATION

A high command would undoubtedly oversee military operations in the Western TVD. It would answer directly to the General Headquarters of the USSR Supreme High Command (Stavka VGK), through the General Staff, in a war confined to Europe and its surrounding seas, or to the high command of the European Theater of War that would be created in the event of a global war. The Western TVD high command might organize three or more *fronts* as the next lower command level. Thus, in a conventional NATO-Warsaw Pact (WP) war without U.S.-Soviet armed conflict elsewhere, the Soviets probably envision a three-tiered command structure at the strategic level, consisting of Stavka VGK--TVD--front. Marshal of the Soviet Union Nikolay V. Ogarkov is believed to be the commander in chief of the high command of the Western TVD.

The area covered by the Western TVD corresponds roughly to that covered by Allied Forces Central Europe (AFCENT) and parts of Allied Forces Northern Europe (AFNORTH), including Denmark, the Baltic approaches, Schleswig-Holstein, and southern Norway (see Fig. S.1). Table S.1 shows the estimated peacetime numerical strength of air-land combat formations, troops, and equipment in the Western TVD. **In a conventional war in Europe, tank forces would constitute approximately 50 percent of the attacking WP ground forces in the Western TVD.**



NATO countries

Warsaw Pact countries

Neutral countries

Area of Western TVD

Area of Soviet deep strategic reserves

NOTE

Under certain circumstances, Hungary might be included in the Western TVD. Also, the Kiev military district might contribute forces to participate in the first strategic offensive of the Western TVD

Fig.S.1—Geographic scope of Western TVD for initial strategic offensive in conventional war

Table S.1

ESTIMATED PEACETIME NUMERICAL STRENGTH OF WESTERN TVD: AIR-LAND COMBAT FORMATIONS, TROOPS, EQUIPMENT

		Army-Level Hq				Divisions				
	Front Hq	C-A* Army	Tank Army	Total	Air Army Hq	Tank	Motor Rifle	Air-borne	Total	Artil-lery Divs
Group of Soviet Forces, GDR	2	2	3	5	2	10	9	0	19	1
Northern Group of Forces	1	0	2	2	1	2	0	0	2	0
Central Group of Forces	1	1	1	2	1	2	3	0	5	0
Baltic MD	1	2	0	2	1	3	6	2	11	2
Belorussian MD	1	1	2	3	1	10	4	1	15	1
Carpathian MD	1	2	1	3	1	4	8	0	12	2
GDR forces	0	2	0	2	0	2	4	0	6	0
Polish forces	1	2	1	3	1	5	8	2	15	0
CSSR forces	1	0	2	2	1	5	5	0	10	1
Total	9	12	12	24	9	43	47	5	95	7

	Troops	Tanks	APCs	Guns 100 mm & over	Air-craft
Group of Soviet Forces, GDR	400,000	6,000	7,800	4,500	840
Northern Group of Forces	50,000	700	900	450	350
Central Group of Forces	110,000	1,500	2,000	1,200	110
Baltic MD	231,000	2,200	2,800	2,175	300
Belorussian MD	315,000	4,000	5,300	3,150	300
Carpathian MD	252,000	3,000	3,900	2,900	350
GDR forces	120,000	1,500	2,500	1,150	360
Polish forces	260,000	3,500	4,100	2,900	700
CSSR forces	200,000	3,500	3,700	2,375	470
Total	1,938,000	25,900	33,000	20,800	3780

*Combined-arms.

NOTE: Strengths are explained in Sec. III, in the subsection "Numerical Strength."

Strategic echelonment, which involves only the front level and above, is historically an integral part of Soviet-WP doctrine for land warfare and force generation. The current peacetime disposition in Europe is probably based on four categories of strategic echelonment: the first strategic echelon, containing first- and second-echelon fronts; the second strategic echelon, consisting of third-echelon fronts; the area of intermediate strategic reserves; and the area of deep strategic reserves. Forces are thought to be assigned to one of these categories based on the time of their scheduled commitment to battle.

PART TWO: MISSIONS

The Soviets apparently have devised several strategies for coping with modern battlefield technologies. **To present as small a target as possible for enemy nuclear strikes, they would disperse their ground forces. To break through enemy defenses, they would mass their ground forces in assault operations. To exploit the breakthrough, they have formed high-speed exploitation forces called operational maneuver groups (OMGs).** Air-land advance detachments, another type of high-speed specialized exploitation force, would operate well ahead of the main force to carry out various combat missions--raids, reconnaissance, sabotage, etc.--in an offensive.

In the Warsaw Pact's offensive strategy for conventional war in Central Europe, follow-on forces, especially operational maneuver groups, might be expected to serve the important purpose of facilitating the rapid conversion of tactical into operational combat success. However, neither OMGs nor the armies that would follow on as the second operational echelon of a first-echelon front have the capability to transform operational into strategic success.

The task of achieving strategic success would fall to second-echelon fronts, which might well be tank fronts, each containing up to three tank armies, 4000 to 5000 main battle tanks, and 6000 to 7000 armored personnel carriers. The Soviets might commit two tank fronts simultaneously on parallel main axes of attack. This ponderous tank armada of up to 10,000 tanks would pose a formidable strategic threat to NATO defenses.

Four scenarios illustrate the **concepts of operations** that the Warsaw Pact would probably follow during the first five days of a European theater conventional war. **The scenarios depict the movements and activities of four representative divisions in the first strategic echelon.** These include a motorized rifle division and three tank divisions, initially deployed at various distances from the main battle area. The motorized rifle division belongs to the initial assault echelon. The first tank division serves the OMG of the first-echelon army; the second is a lead element of a second-echelon tank army; the third is part of a second-echelon tank front.

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CONTENTS

PREFACE iii

SUMMARY v

ACKNOWLEDGMENTS xi

FIGURES xv

TABLES xvii

Section

I. INTRODUCTION 1

Part One

ORGANIZATION: FORCE AND COMMAND STRUCTURE

II. ORGANIZATIONAL CONCEPTS 6

Intermediate Command Levels 6
Strategic Guidelines 15
Strategic Echelonment 21

III. WESTERN TVD FORCE AND COMMAND STRUCTURE 30

Geographic and Military Scope 30
Force Composition 39
Numerical Strength 48
High Command 54

Part Two

MISSIONS: ASPECTS OF INITIAL STRATEGIC OFFENSIVE CONDUCTED WITH CONVENTIONAL WEAPONS

IV. HIGH-SPEED EXPLOITATION FORCES 60

Operational Maneuver Groups 60
Air-Land Advance Detachments 63
Tank Fronts: New Strategic Dimension 70

V. NUMERICAL NORMS AND PROCEDURES 75

Battlefield Operations 75
Marches 79
Assembly and Departure Areas 86
Railroad Transport 90
Trailer Transport 93
Command Posts 94

VI. SCENARIOS FOR FIRST FIVE DAYS OF CONFLICT 106

First Representative Division 108
Second Representative Division 117
Third Representative Division 120
Fourth Representative Division 126

Appendix

A. SOVIET WORLD WAR II NORMS AS INDICATORS OF FORCE DENSITIES IN CONTEMPORARY CONVENTIONAL CONFLICT 135

B. POSSIBILITIES FOR A MANCHURIAN-TYPE BLITZKRIEG IN EUROPE .. 142

C. ALERT ASSEMBLY AREAS OF WARSAW PACT GROUND FORCES 145

D. COMBATING COMMAND POSTS AND FIELD DEPOTS 150

E. NATO COMMAND POSTS UNDER ATTACK 158

GLOSSARY 165

REFERENCES 167

FIGURES

S.1 Geographic Scope of Western TVD for Initial Strategic Offensive in Conventional War vi

1. High Commands of Soviet Strategic Directions in World War II 11

2. Soviet Far Eastern High Command, 1945 13

3. Geographic Scope of Western TVD for Initial Strategic Offensive in Conventional War 17

4. Major Strategic Distances in Western TVD 20

5. Evolution of Soviet Strategic Echelonment in European Theater 23

6. Notional Strategic Echelonment of Main Strategic Direction . 25

7. NATO Surveillance Capabilities from Bornholm and from West Germany 34

8. Notional Initial Wartime Composition of Western TVD 40

9. Estimated Depths and Distances Between Combat Formations at Beginning of Attack on Main Battle Area 81

10. Maneuver Regiment Prebattle Formations 84

11. Structure of a Typical March Between Departure Area and Assembly Area 89

12. Soviet Command Posts in Offensive: Areas of Direct Influence in Own Territory 95

13. Procedures for Relocating Command Posts 100

14. Movements of Four Representative Maneuver Divisions in First Five Days of Theater Conventional War 107

15. Movements of First and Second Representative Divisions, D-Day to D+4 113

16. Movements of Third Representative Division, D-Day to D+4 ... 122

17. Route of Fourth Representative Division Deploying to Battle Area, D-Day to D+5 127

18. Diagram of Troop Train Unit of Fourth Representative Division 127

19. Movements of Fourth Representative Division, D-Day to D+5 .. 129

A.1. Force Densities on 2d Ukrainian Front, March 3, 1944 138

A.2. Asymmetries in Combat Strength and Frontages in Ukraine in Strategic Operation Begun March 4, 1944 139

C.1. Locations and Types of Soviet Ground Force Alert Assembly Areas 146

D.1. Principal Elements of Soviet Main Command Post 153

D.2. Movement Between Depots and Medical Points 157

TABLES

S.1 Estimated Peacetime Numerical Strength of Western TVD: Air-Land Combat Formations, Troops, Equipment vii

1. Equivalent Warsaw Pact and NATO Command Levels 9

2. Land Area and Population of Western TVD 30

3. Western TVD Strategic Echelonment: Scenarios for Attacks With Short Warning and After Ten Days of Mobilization 49

4. Estimated Peacetime Numerical Strength of Western TVD: Air-Land Combat Formations 50

5. Estimated Peacetime Numerical Strength of Western TVD: Air-Land Combat Troops and Equipment 51

6. Estimated Combat Readiness of Western TVD Forces 53

7. Soviet and NSWP Force Allocations to Western TVD 54

8. Comparison of Five Types of Normal Soviet Air-Land Advance Detachments in Conventional Offensive 66

9. Composition and Strength of Normal Soviet Air-Land Forward Detachments in Conventional Offensive 68

10. Notional Plan for WP First Strategic Offensive in Central Europe Using Conventional Weapons 72

11. Notional Deployment for WP First Strategic Offensive in Central Europe Using Conventional Weapons 73

12. Notional Norms for Front Main-Axis Offensive in First Five Days of NATO-WP Conventional War 77

13. Notional WP Formation Frontages and Objectives in Initial Phase of Conventional Offensive 78

14. Notional WP Advance Rates on Main Axis During First Five Days of Conventional War 80

15. Typical Norms for Commitment of WP Follow-On Forces on Main Axis in Conventional Offensive 80

16. Principal Parameters of Soviet Army March Formations 83

17. Changes in Regimental Prebattle Column Size 85

18. Average Strength of Reinforced Maneuver Battalions in Offensive 87

19. Estimated Size of Off-Road Short-Halt Areas of Undispersed Maneuver Battalions 90

20. Soviet Field Command Posts in Offensive: Estimated Men, Vehicles, Area, and Distance From Line of Contact (LoC) 96

21. Units Directly Protecting and Defending Command Posts in Offensive 97

22. Estimated Time Required for Relocation of Army and Front Main Command Posts Without Enemy Opposition 102

23. Estimated Number and Distance of Key Command Post Relocations on Main Attack Axis in First Five Days of Theater Nonnuclear War 103

24. Probable Location of Key Command Posts During March From Rear to Forward Area 104

25. Composition of Troop Train Units of Fourth Representative Division 128

A.1. Operational and Strategic Density of Soviet Fronts in Ukraine: Strategic Operation of March 3, 1944 137

D.1. Area of Most Important Command Posts of Main-Axis Front 154

E.1. Notional WP Guidelines for Combating NATO Command Posts in Central Europe 160

E.2. Notional Sequence of WP First Strike on NATO Command Posts . 162

I. INTRODUCTION

Believing that a future war may break out anywhere and spread to any part of the world, the Soviets divide the globe into geographic (continental and oceanic) theaters of war (*teatry voyny*--abbreviated TVs), which they define as follows:

> A theater of war is the land, oceans, and airspace and outer space above them, within the bounds of which the armed forces of states (coalitions of states) may conduct war or military operations on a strategic scale. A TV does not have strictly defined boundaries; it usually contains one continent with its surrounding waters or one ocean with its coastal areas, archipelagoes, and islands.[1]

The major continental theaters of war are the European (Western) TV, the Southern TV, and the Far Eastern TV.[2]

A theater of war may include one or more theaters of military operations (*teatry voyennykh deystviy*--abbreviated TVDs).[3]

> A theater of military operations is an extensive land area of a continent and its coastal seas, or the waters of an ocean (sea), including islands and adjacent continental coastal areas, as well as the airspace and outer space above them, within the bounds of which strategic groupings of armed forces (ground, air, and naval) may deploy and conduct military operations on a strategic scale. The military-political leadership of the states (coalitions of states) determines the borders and forces of the TVD.[4]

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[1]See "Teatr voyny," *Voyennyy entsiklopedicheskiy slovar'* (Military Encyclopedic Dictionary--abbreviated *VES*), 2d ed., Voyennoye Izdatel'stvo, Moscow, 1986, p. 733.

[2]See, for example, *Soviet Military Power 1986,* U.S. Department of Defense, U.S. Government Printing Office, Washington, D.C., March 1986, p. 11.

[3]See "Teatr voyny," *VES,* p. 733.

[4]See "Teatr voyennykh deystviy," *VES,* p. 732. Although the Russian term *teatr voyennykh deystviy* does not contain the word "strategic," the *VES* definition makes clear that strategic military operations is meant. See also Viktor Suvorov, "Strategic Command and Control: The Soviet Approach," *International Defense Review,* No. 12, 1984, pp. 1813, 1815,

The Soviets recognize some 14 TVDs.[5]

The European TV, the most important theater of war, is divided into three theaters of military operations: the Western TVD, the Northwestern TVD, and the Southwestern TVD.[6] The forces of the Western TVD constitute the largest peacetime concentration of military power in the history of Europe. In the event of a full-scale theater conventional war with NATO, forces of the Western TVD would have the major responsibility for fighting the Western allied forces.

This study examines the organization and missions of the Western TVD in the context of Soviet and Warsaw Pact (WP) military planning. Part One analyzes the strategic role that the Western TVD would likely play in the initial period of a conventional war in Central Europe.[7] Individual sections of Part One discuss organizational concepts (including that of strategic echelonment) and the force and command structure of the Western TVD.

Part Two addresses selected aspects of a Soviet-Warsaw Pact initial strategic offensive in Europe, focusing in particular on Soviet concepts of operations for theater conventional war. In addition to examining the use of high-speed exploitation forces at the tactical, operational, and strategic levels of battle, Part Two describes many numerical and

---

and John G. Hines and Phillip A. Petersen, "Changing the Soviet System of Control," *International Defense Review,* No. 3, 1986, pp. 283-284. Hines and Petersen use "theater of strategic military action (TSMA)" in preference to "theater of military operations (TVD)." Moreover, Hines and Petersen, Suvorov, and other analysts translate *deystviy* as "action" rather than "operations." See also Jack Sullivan and Maj. Tom Symonds, "Soviet Theaters, High Commands and Commanders," U.S. Department of the Air Force, Headquarters Air Force Intelligence Service, Fort Meade, Maryland, March 14, 1986, pp. 1-19. *VES,* p. 515, defines *operatsiya* (operation) as *forma voyennykh deystviy* (a form of military action).

[5]According to *Soviet Military Power 1986,* pp. 12-13, "the Soviets have identified ten continental TVDs and four oceanic TVDs." Hines and Petersen (1986), p. 282, identify 15 TVDs; however, they include the central strategic region around Moscow, while *Soviet Military Power 1986* does not. Suvorov (1984), p. 1814, lists 16, including the central strategic region.

[6]See, for example, *Soviet Military Power 1986,* pp. 11-13.

[7]The Soviets believe that a world war could be waged, at least for a limited time, with conventional weapons only, although they recognize the possibility that such a war could escalate to nuclear conflict. See *Soviet Military Power 1986,* p. 11.

procedural norms for the movement of troops, offensive operations, and logistics in the rear, in both peace and war.

The norms, which represent my own estimates, are based largely on my experience as a field grade officer in the Polish army working closely with Soviet and Warsaw Pact forces and on current unclassified Soviet, Eastern European, and Western military literature. Such norms are usually not spelled out explicitly in Soviet and WP open sources.

Part Two ends with scenarios depicting the deployments and combat operations of four representative Soviet divisions during the first five days of a conventional offensive in Central Europe. The scenarios illustrate the use of the high-speed exploitation forces and the numerical and procedural norms that would guide their employment in the context of Soviet organizational concepts and force and command structure.

Five appendixes complete the study. The first discusses the credibility of World War II norms as indicators of likely WP force densities in a modern conventional conflict; the second, the possibility that the Soviets might plan a conventional war in Europe along the lines of their successful August 1945 blitzkrieg against the Japanese in Manchuria. Other appendixes examine the Soviet-Warsaw Pact system of alert assembly areas and command post and field depot vulnerabilities. The final appendix presents a scenario for attacking NATO command posts.

Where available, current unclassified Soviet and Eastern European sources are cited to support my conclusions.[8] The Soviet and WP strength estimates used in the section on force structure were derived from *The Military Balance 1984-1985* and *The Military Balance 1985-1986* (International Institute for Strategic Studies, London, 1984 and 1985), which offer the best and most complete *unclassified* analysis of peacetime military strength. However, I use these estimates only as the

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[8] In addition, an authoritative book by the chief researcher of the Soviet armed forces and deputy chief of the General Staff, published after I had completed the research for the present study, appeared to substantiate my analysis of modern Soviet conventional and nuclear warfare strategy. See Col. Gen. Makhmud Gareyev, *Frunze--Voyennyy teoretik: vzglyady M. V. Frunze i sovremennaya voyennaya teoriya* (Frunze--Military Theoretician: The Views of M. V. Frunze and Contemporary Military Theory), Voyennoye Izdatel'stvo, Moscow, 1985, 447pp.

basis for the discussion of operational concepts; they should in no way be considered an intelligence estimate of current Soviet order of battle in the Western TVD.

Part One

ORGANIZATION: FORCE AND COMMAND STRUCTURE

Although the Soviets envision the possibility of three major theaters of war, they plan detailed strategic operations on the basis of the next lower command level: the theaters of military operations. The TVD organizational concept enables military planners to develop the strategy and tactics to achieve military and political objectives in a geographic region, taking into consideration the capabilities of the missiles, aircraft, ships, and ground forces at their disposal.

In a conventional war between NATO and the Warsaw Pact (assuming that the fighting was limited to Europe and that only conventional weapons were used), the Soviets might be expected to rely on a three-tiered strategic command structure. Section II discusses the intermediate command structure, its evolution, and the apportionment of strategic reserves among the command levels. It also reviews some of the military principles on which the Soviets base their strategic and operational planning, including the concept of strategic echelonment.

The Western TVD, which covers roughly the same area of Europe as the NATO Central Region, as well as NATO's Baltic approaches and a substantial portion of NATO's Northern Region, would bear the brunt of the WP advance in a single-theater scenario. Section III describes the geographic and military scope, force composition, numerical strength, and high command of the Western TVD.

II. ORGANIZATIONAL CONCEPTS

INTERMEDIATE COMMAND LEVELS

TVD High Commands

A high command (*glavnoye komandovaniye*--abbreviated GK) would probably direct military activities in each theater of military operations in Europe, including the Western TVD. Depending on the extent of the conflict, these high commands might answer either to the General Headquarters of the USSR Supreme High Command (*Stavka Verkhovnogo glavnokomandovaniya*--abbreviated Stavka VGK) through its operating organ, the General Staff, or to the intermediate-level high command of the European Theater of War. The European TV high command would, in turn, answer to the Stavka VGK and the General Staff in or near Moscow.[1]

In the event of a global war, the Soviets would almost certainly activate a high command of the European Theater of War as an intermediate level between the Stavka VGK in Moscow and the three TVD high commands in Europe. This extra level would ensure centralized strategic planning and decentralized battle management; it would also limit the Stavka's span of operational control to reasonably workable proportions. The TVD high commands would then report to the high command of the European TV. Were the war confined to Europe and its surrounding seas, the European TV high command would probably not be activated, and the TVD high commands would answer directly to the Stavka through the General Staff.

The term *theater of military operations* thus has two connotations in Soviet military science: First, it refers to a strictly defined

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[1]For a comprehensive description of high-command levels and leaders, see Ulrich-Joachim Schulz-Torge, "The Soviet Military High Command," *Military Technology*, Part I, August 1985, pp. 111-121, and Part II, September 1985, pp. 102-110, and "Das sowjetische Militaer unter Michail S. Gorbatschow," *WT*, No. 12, December 1986, pp. 87-89. See also Edward L. Warner III, Josephine J. Bonan, and Erma F. Packman, *Key Personnel and Organizations of the Soviet Military High Command*, N-2567-AF, The RAND Corporation, Santa Monica, Calif., April 1987.

geographic area in which military operations may occur.[2] It also implies an intermediate element of the strategic command structure between the Stavka VGK or theater of war headquarters, above, and the next lower command level, the *front* headquarters, below.[3]

The fact that the USSR currently divides the world into some 14 TVDs does not necessarily signify, however, that it has established high commands or appointed commanders in chief of each TVD. One may assume, for example, that although an Australian TVD may exist and although the General Staff may keep up-to-date military and geographic files on it, the Soviets have not designated a high command and commander in chief responsible for operations in that TVD.

Based on the list of those who signed the obituary of Marshal of the Soviet Union Dmitriy F. Ustinov,[4] then minister of defense, one may postulate the existence of four theater high commands as of December 1984:

- Western TVD, with Marshal N. V. Ogarkov as commander in chief.
- Southwestern TVD, under Army General I. A. Gerasimov (formerly commander of the Kiev MD).
- Southern TVD, under Army General Yu. P. Maksimov (formerly commander of the Turkestan MD); Army General M. M. Zaytsev replaced Maksimov in July 1985, when the latter moved up to the post of deputy minister of defense and commander in chief of the Strategic Rocket Troops.

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[2]See "Teatr voyennykh deystviy," *Voyennyy entsiklopedicheskiy slovar'* (Military Encyclopedic Dictionary--abbreviated *VES*), 2d ed., Voyennoye Izdatel'stvo, Moscow, 1986, p. 733. Also see the same entry in *Sovetskaya voyennaya entsiklopediya* (Soviet Military Encyclopedia--abbreviated *SVE*), Voyennoye Izdatel'stvo, Moscow, Vol. 8, pp. 8-9.

[3]See, for example, Viktor Suvorov, "Strategic Command and Control: The Soviet Approach," *International Defense Review*, No. 12, 1984, pp. 1813-1815. Fronts are discussed in the subsection immediately below.

[4]*Krasnaya zvezda*, December 22, 1984. See also Schulz-Torge, "The Soviet Military High Command" (Part II), pp. 103-104.

- Far Eastern TVD, under Army General I. M. Tret'yak (formerly commander of the Far Eastern TVD); Army General I. M. Voloshin succeeded Tret'yak in October 1986, after the latter took over as deputy minister of defense and chief inspector in July 1986.

Strategic Directions and Fronts

Each active continental TVD might be divided geographically into several *strategic directions*.

> A strategic direction is part of a TVD consisting of an extensive strip of land with its coastal seas (oceans) and the airspace and outer space above them. Within the bounds of a strategic direction, large groupings of various types of armed forces of the belligerent sides are positioned and deployed and, in wartime, conduct operations (carry out combat actions).[5]

Although strategic direction is defined as a geographic area, the term implies the forward movement of massed combined-arms forces to achieve specific strategic objectives.[6] Each strategic direction might contain several operational directions, each encompassing operational and strategic objectives, such as groups of ground, naval, and air forces; administrative, political, and industrial centers; and naval and air bases.[7]

Each active TVD would probably establish two or more fronts (*fronty*) as the next lower command level.

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[5] "Strategicheskoye napravleniye," *SVE*, Vol. 7, 1978, p. 555. See also "Strategicheskoye napravleniye," *VES*, p. 711.

[6] See the map showing notional strategic and operational directions of the Western TVD in *Soviet Military Power 1986*, U.S. Department of Defense, U.S. Government Printing Office, Washington, D.C., March 1986, p. 61. See also John G. Hines and Phillip A. Petersen, "Changing the Soviet System of Control," *International Defense Review*, No. 3, 1986, p. 283.

[7] "Operatsionnoye napravleniye," *SVE*, Vol. 6, 1978, p. 64, *VES*, p. 514, and *Soviet Military Power 1986*, p. 61.

> A front is an operational-strategic formation of armed forces, usually created on the eve of a war...to achieve operational-strategic objectives on one strategic or several operational directions of a continental TVD.[8]

The fronts thus would continue to serve as the basic combined-arms operational-strategic component of theater forces responsible for land operations, as they did in World War II. The closest NATO equivalent would be an army group with organic tactical aviation, as shown in Table 1.[9] In a conventional NATO-WP war without further U.S.-Soviet armed conflict elsewhere, the scenario considered here, the Soviets would rely on a three-tiered command structure at the strategic level: Stavka VGK--TVD high command-front command.

Table 1

EQUIVALENT WARSAW PACT AND NATO COMMAND LEVELS

Warsaw Pact	NATO
High Command, European Theater of War (ETV)	Allied Command Europe (ACE)
High commands, theaters of military operations (TVDs)	Allied theater commands (AFNORTH, AFCENT, AFSOUTH)
Fronts	Army groups (NORTHAG, CENTAG)
Armies	Armies
---[a]	Corps
Divisions	Divisions

[a]Soviet combined-arms army corps are deployed only inside the USSR, on secondary axes, and in difficult terrain.

[8]See "Front," *VES*, p. 787.
[9]See *Soviet Military Power 1986*, p. 59.

Precedent for Three-Tiered Strategic Command Structure

During most of World War II, only two levels of strategic command--Stavka VGK and front--directed the Soviet forces. The shortcomings of this arrangement prompted the Stavka to impose, for varying periods and in different sectors, a third, intermediate level of strategic command, which at different times took three different forms.

In the wake of the 1941 German invasion, the Stavka established intermediate-level high commands of the Northwestern, Southwestern, Western, and North Caucasus strategic directions.[10] These commands, which are shown in Fig. 1, existed only between July 1941 and May 1942.[11] Current Soviet military historiography rates the activities and effectiveness of these four commands quite negatively. The commands had limited authority and lacked the operational-level reserves, air support, and artillery support to influence the battlefield outcome. They also lacked sufficient staff support: Their headquarters consisted on average of only 110 generals and officers,[12] in contrast to the approximately 1000 generals and officers then assigned to front headquarters.

The second intermediate command structure during World War II involved skeleton staffs of senior officers serving as Stavka representatives. Some staffs included up to 40 generals and officers; most, however, were considerably smaller.[13] Marshals and generals were

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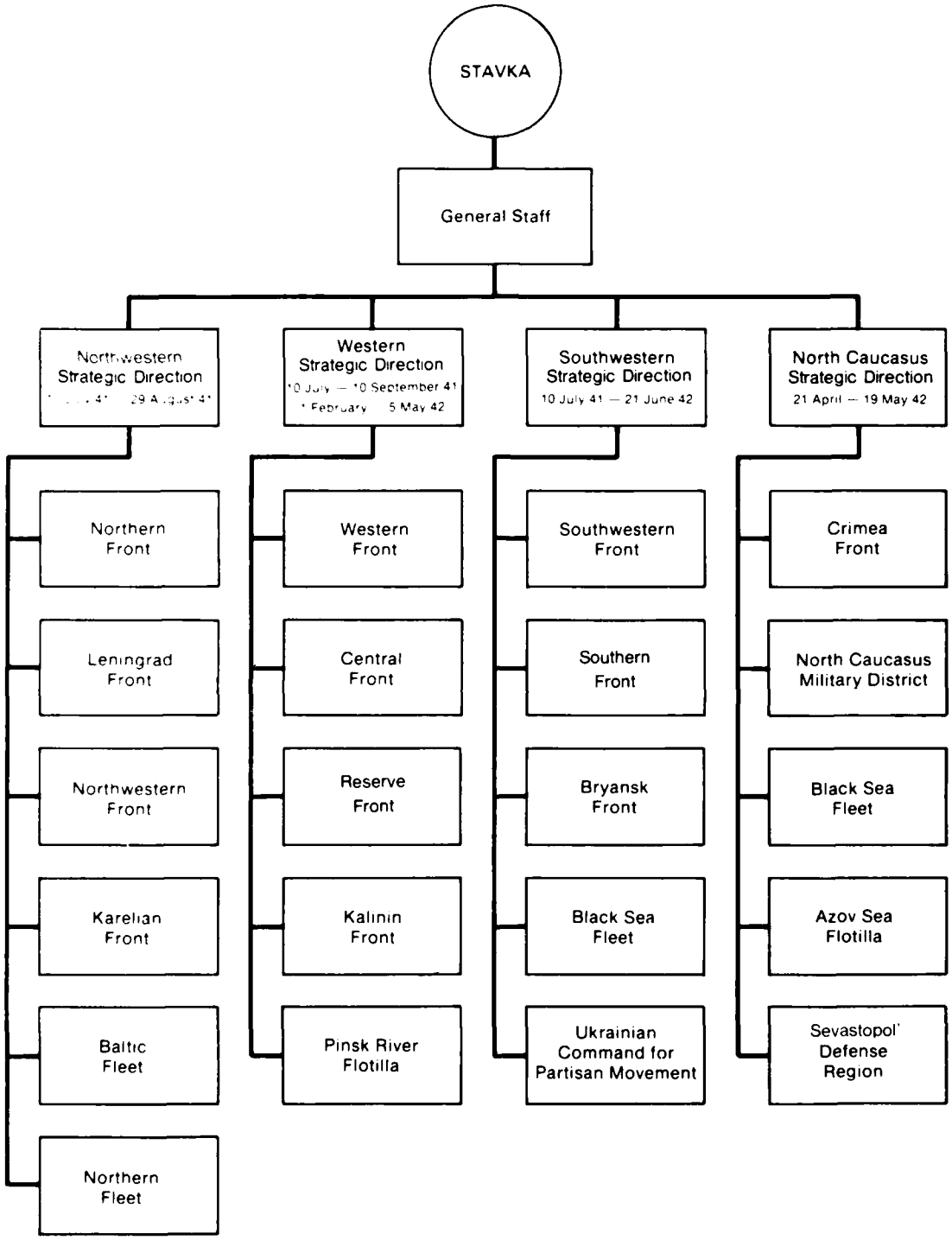
[10]See the appropriate entries in the *SVE* (1976-1980). Also see V. Gurkin, "Some Questions from the Experience of the Creation and Activity of High Commands of Direction Troops," *Voyenno-Istoricheskiy zhurnal (VIZh)*, July 1984, pp. 11-19. This is the most comprehensive Soviet article on the structure and composition of these commands. Other authoritative sources include Col. Gen. A. Pokrovskiy, "On the Southwestern Direction," *VIZh*, April 1978, pp. 64-72; S. P. Ivanov and N. Shekhavtsov, "Experience of the Work of the High Commands in Theaters of Military Operations," *VIZh*, November 1981, pp. 11-18; and Army General M. M. Kozlov, "Soviet Strategic Leadership in the Great Patriotic War," *VIZh*, July 1985, pp. 34-37. For an English-language source, see Gregory C. Baird, *Soviet Intermediary Strategic C^2 Entities--The Historical Experience*, The BDM Corporation, McLean, Va., 1979, 111pp.

[11]Gurkin (1984), p. 12.

[12]Ibid.

[13]See, for example, the memoirs of A. M. Vasilevskiy, G. K. Zhukov, and N. N. Voronov.



SOURCE: Compiled from appropriate entries in *Sovetskaya voyennaya entsiklopediya*, 1976-1980.

NOTE: The composition of the high commands of the strategic directions varied over time as fronts, fleets, and other components were moved from one to another

Fig. 1—High commands of Soviet strategic directions in World War II

dispatched from Moscow to coordinate both the preparations and military operations of two or more fronts that were taking part in a multifront strategic operation. Postwar Soviet evaluations of the effectiveness of these Stavka representatives are mixed.[14]

The third intermediate command arrangement of World War II, a regional high command in the Far East, was established during the Manchurian campaign of August-September 1945, under the leadership of Marshal Vasilevskiy (see Fig. 2). Soviet military writers consider this operation and the organizational arrangements that supervised its execution extremely successful.

Endowed with a high degree of operational autonomy and ample force elements, the Far Eastern high command led the Soviet Far Eastern forces, consisting of three fronts and two fleets, to rapid victory. The campaign is still cited as one of the most brilliant strategic operations of World War II.[15] Vasilevskiy's high command apparently served as a model for the recently created intermediate strategic commands in potential combat theaters (TVs and TVDs) around the periphery of the Soviet Union, including Europe.

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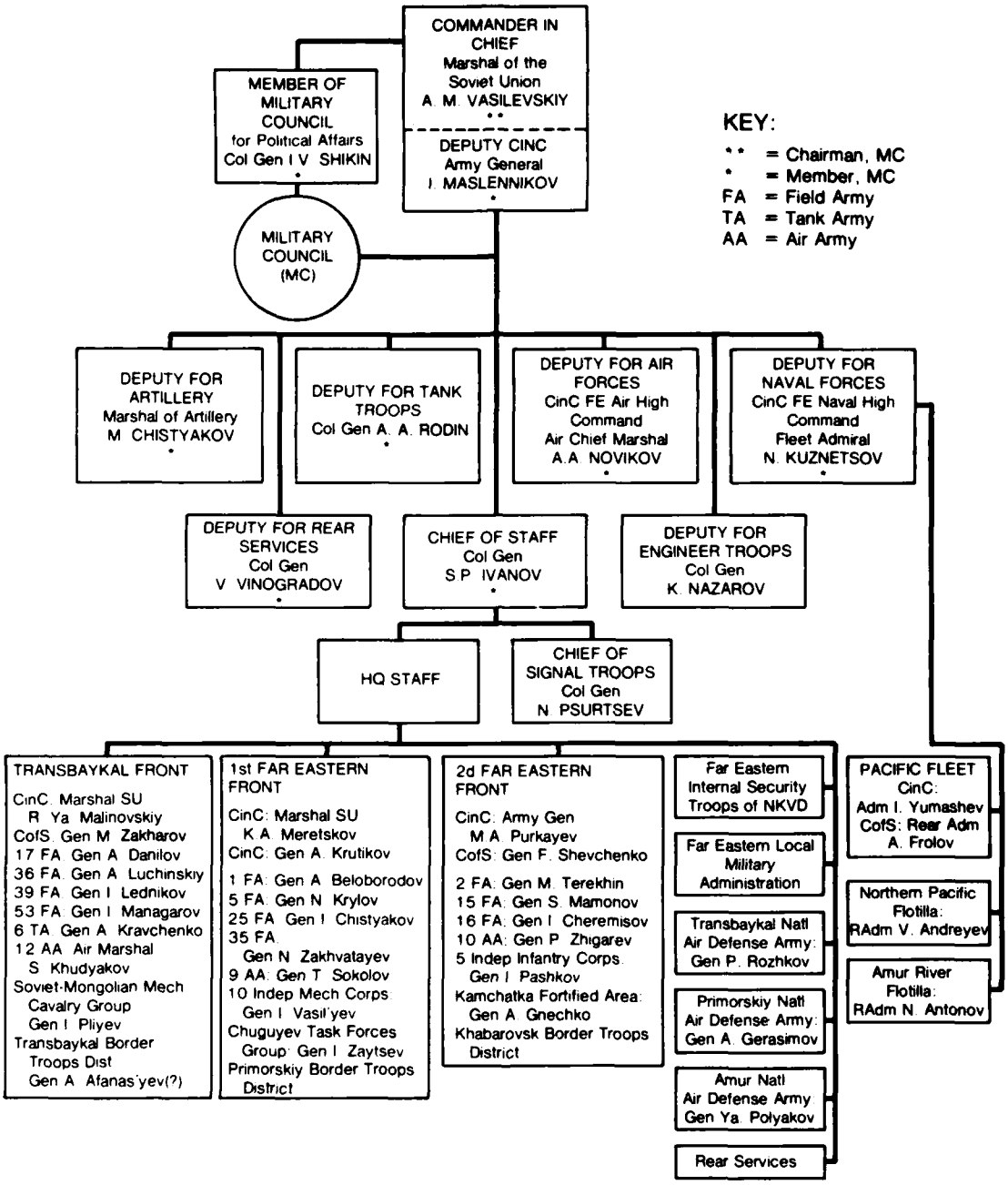
[14]Marshals of the Soviet Union G. K. Zhukov and A. M. Vasilevskiy and Marshal of Artillery N. N. Voronov, all of whom served as Stavka representatives, assessed the role of these officers positively. Marshal of the Soviet Union K. K. Rokossovskiy, however, wrote that the device worked poorly and should not have been used. See K. K. Rokossovskiy, *Soldatskiy dolg* (A Soldier's Duty), Voyenizdat, Moscow, 1968, p. 225. Marshal of the Soviet Union S. S. Biryuzov, chief of staff of the Third Ukrainian Front in World War II and chief of the General Staff in 1963-1964 agreed with Rokossovskiy; see his *Surovyye gody* (The Grim Years), Voyenizdat, Moscow, 1966. Members of the more recent Soviet military leadership, including Marshal of the Soviet Union V. G. Kulikov, formerly chief of the General Staff and now commander in chief of the Warsaw Pact Forces, have taken a neutral position regarding the utility of this command method, but have not mentioned it in discussions of future command arrangements. See Victor G. Kulikov, "Strategic Leadership of the Armed Forces," *VIZh*, June 1975, in U.S. Joint Publications Research Service, *Translations on USSR Military Affairs*, No. 1360, July 3, 1978, pp. 25-39.

[15]See Lt. Col. David M. Glantz, *August Storm: The Soviet 1945 Strategic Offensive in Manchuria*, Leavenworth Paper No. 7, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas, February 1983. See also Glantz's *August Storm: Soviet Tactical and Operational Combat in Manchuria, 1945*, Leavenworth Paper No. 8, June 1983.



SOURCES: Based on Michael Sadykiewicz, "Soviet Far East High Command: A New Developmental Factor in the USSR Military Strategy Toward East Asia," in *The Soviet Union and East Asia in the 1980s*, edited by Jae Kyu Park and Joseph M. Ha, Kyungnam University, Seoul, 1983, p. 171, and the appropriate entries in the *Sovetskaya voyennaya entsiklopediya, 1976—1980, and Voyennyy entsiklopedicheskiy slovar'*, 1986

Fig. 2—Soviet Far Eastern high command, 1945

Even the Soviet Far Eastern high command of 1945, however, lacked sufficient means, such as reserves of ground and air forces, to influence the battlefield outcome. These assets were sent instead to the fronts and fleets that operated under the Far Eastern high command.[16] But, because the opposing forces, the Japanese Kwantung Army, offered only minimal resistance, the absence of strategic reserves under Vasilevskiy's control did not hamper his campaign.[17]

Intermediate Strategic Reserves

Current Soviet military doctrine provides that in the face of a strong enemy all intermediate strategic commands will have at their immediate disposal, or will at least have the support of, the means to influence the course of military operations. Consequently, in addition to the general-purpose troops deployed among the various fronts within a TVD, the TVD high command would also control the motorized rifle, tank, and artillery troops that would be used to strengthen these fronts, especially on main axes of attack.

A TVD high command's support means would include strategic rocket troops, long-range aviation, and airborne troops. The General Staff, operating in accordance with the decisions of the Stavka VGK and the top CPSU leadership, would retain the right to authorize the release of nuclear weapons. After doing so, it would make available selected regional strategic missiles (SS-4s, SS-20s, and SS-11s) of the strategic rocket troops to strike targets nominated by the TVD high command.

Thus, two types of Soviet and Warsaw Pact strategic reserves would appear on a future battlefield: reserves of the Supreme High Command and reserves of the TVD high commands. The VGK reserves and TVD high-

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[16]See, for example, Marshal of the Soviet Union Rodion Ya. Malinovskiy, *Final* (Finale), Nauka, Moscow, 1966, and Peter W. Vigor and Christopher Donnelly, "The Manchurian Campaign and Its Relevance to Modern Strategy," *Comparative Strategy*, February 1980. See also Lilita Dzirkals, *"Lightning War" in Manchuria: Soviet Military Analyses of the 1945 Far East Campaign*, P-5589, The RAND Corporation, Santa Monica, Calif., January 1976.

[17]The possibilities for a future blitzkrieg in Europe similar to the Soviet Far Eastern campaign are analyzed in Appendix B.

command reserves would each include both specialized reserves and general-purpose reserves.[18] Reserve strike forces would be employed at the direction of the Stavka through the General Staff, often at the request of the TVD high command or of a front commander. The reserves would be supported by missile and aircraft strikes and, sometimes, by strategic air landings. The discussion of strategic and operational guidelines immediately following deals with general-purpose reserves.

STRATEGIC GUIDELINES

According to the theory and practice of Soviet military strategy, the choice of the main attack direction (*napravleniye glavnogo udara*) and the allocation of forces and means for its execution form the basis of all war plans.[19] The principles of military art--mass, surprise, economy of force, offensive, maneuver, and depth of battle--in turn determine the direction of the main attack axis, the generation of the forces, and the means to mount the assault.[20]

Theater Operations

The Soviets consider Europe north of the Carpathians and Alps and south of the Scandinavian peninsula (but including the southern parts of Norway and Sweden) the crucial area in strategic planning for a major

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[18]An excellent article on this subject is Maj. R. G. Poirier and Maj. A. Z. Conner, "Soviet Strategic Reserves: The Forgotten Dimension," *Military Review*, November 1983, pp. 28-39.

[19]Defense, in contrast, is based on the choice of the region of concentrated efforts (*rayon sosredotocheniya osnovnykh usiliy*).

[20]See Maj. Gen. A. A. Sidorenko, "Principles of Military Art," *SVE*, Vol. 6, 1978, pp. 542-543. The *VES* lacks an entry for principles of military art, but contains entries for the nine individual principles ("Mass," "Surprise," etc.). Of these nine, however, only "Concentration," "Surprise," and "Coordination" are described in the *VES* as principles of war. Thus, one may surmise the existence of a continuing controversy as to the principles of modern war. Also see General Donn A. Starry, "The Principles of War," *Military Review*, September 1981, pp. 2-12; U.S. Department of the Army, Headquarters, *Operations*, FM 100-5, Appendix B, "The Principles of War," pp. B-1 to B-5; U.S. Army Training and Doctrine Command, *Soviet Army Operations and Tactics*, FM 100-2-1 (TBP FY84), Coordinating Draft, August 1982, U.S. Government Printing Office, Washington, D.C., 1984, pp. 2-10 to 2-14.

NATO-WP conflict. They call the area the Western TVD (see Fig. 3); NATO calls essentially the same area the Central Region or Central Front.[21] The Western TVD-Central Region obviously encompasses the most important areas of Europe, especially in terms of human and industrial resources. For the Warsaw Pact, the defeat of NATO military forces concentrated in that area would decide the outcome of a war in Europe.

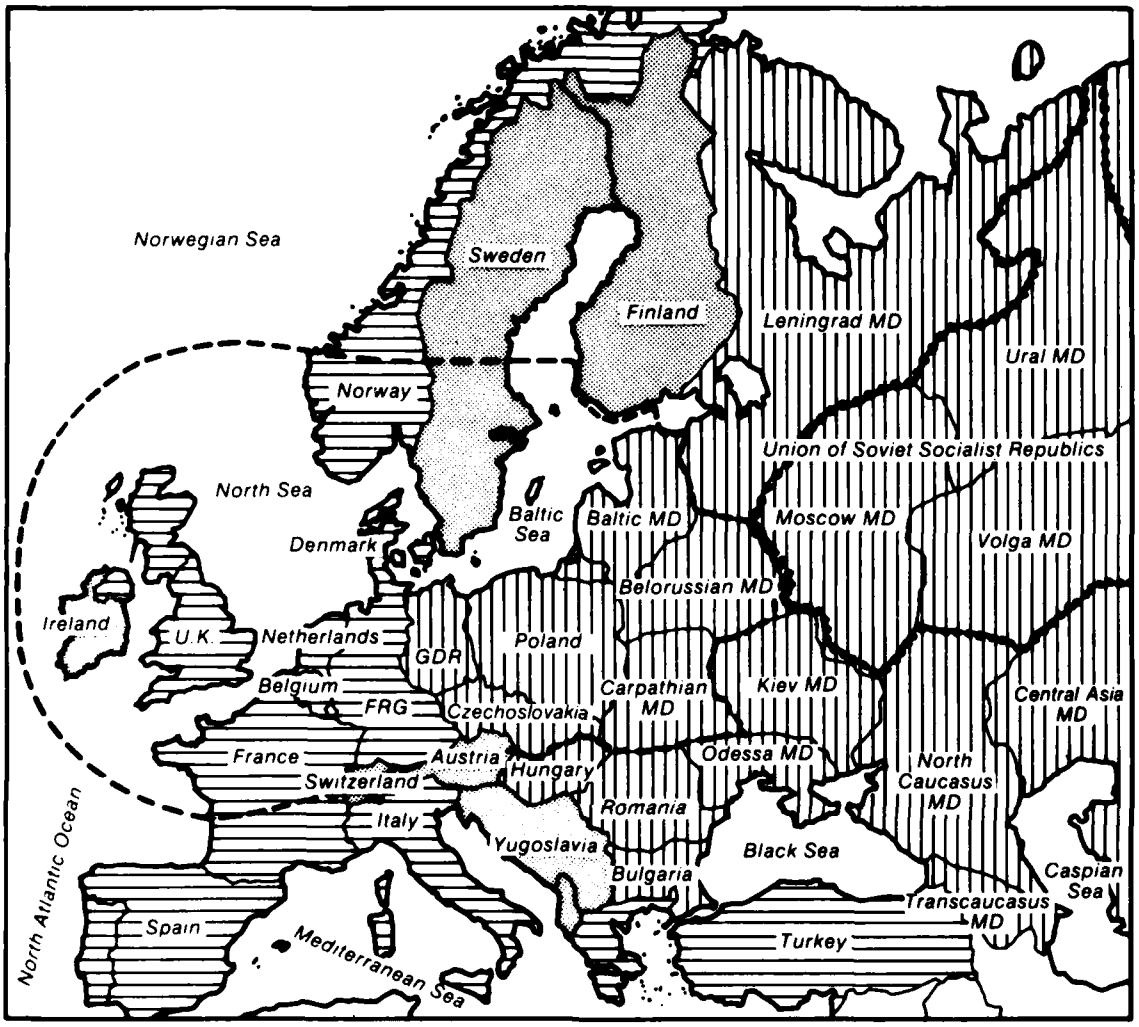
The Soviet principle of *mass* (i.e., the density of forces and means) demands the concentration of combat power at a decisive time and place. The place with regard to a war in Europe would be the Western TVD. According to this principle, the Western TVD would have to achieve sufficient numerical force superiority over the NATO Central Region to defeat it rapidly and decisively and to win the war.

Warsaw Pact forces could strike the entire depth of NATO forces in the Central Region simultaneously (principle of *depth of battle*) and unexpectedly (principle of *surprise*), because the terrain of this region would favor high-speed armored maneuver (principles of *offensive* and *maneuver*). The effective application of these principles would be more difficult in the Southwestern TVD, which encompasses four distant theaters: Asiatic Turkey; Greece and European Turkey; Italy; and southern France, Spain, and Portugal. The principle of *economy of force*, requiring the allocation of minimal combat assets to secondary efforts, would likely be applied to the Northwestern and Southwestern TVDs.

Three additional Soviet military terms--initial period of war, strategic objective, and first (initial) strategic operation--further illustrate the strategic importance of the Western TVD. The 1986 *Voyennyy entsiklopedicheskiy slovar'* defines the first two terms as follows:

> The initial period of war is the time during which belligerent states carry out military actions using [only] the armed forces deployed before the outbreak of war, either to achieve immediate strategic objectives or to create favorable conditions for the main forces to enter the war and for

[21]The Central Region does not include Denmark, the Baltic approaches, and the Schleswig-Holstein region of the Federal Republic of Germany.



NATO countries

Warsaw Pact countries

Neutral countries

Area of Western TVD

Area of Soviet deep strategic reserves

NOTE:

Under certain circumstances, Hungary might be included in the Western TVD. Also, the Kiev military district might contribute forces to participate in the first strategic offensive of the Western TVD

Fig. 3—Geographic scope of Western TVD for initial strategic offensive in conventional war

> subsequent military actions.... Under contemporary conditions, the initial period of war may become the tensest period, when the two belligerent sides will strive for the optimum employment ...of previously created and secretly deployed groupings of armed forces to achieve the basic objectives of the war, to conduct the first strategic operation, and simultaneously to complete the strategic deployment of the armed forces and mobilize the state resources required for the war.[22]

> The strategic objective is the planned result of military actions on a strategic scale, the achievement of which leads to significant and sometimes radical changes in the military-political and strategic situation conducive to the successful conduct and victorious outcome of the war.[23]

The Soviet literature does not define first strategic operation (*pervaya strategicheskaya operatsiya*), perhaps owing to the sensitivity of the term.[24] However, the military dictionary defines strategic operation as follows:

> A strategic operation is the aggregate of strikes and combat actions of major field formations of armed forces, coordinated and interrelated as to objective, mission, time, and place, performed according to a unified concept and plan to achieve strategic objectives.... In World War II,...the simultaneous advance of a group of fronts according to a unified plan, directed by the VGK.[25] During a strategic operation in a

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[22]See "Nachal'nyy period voyny," *VES*, p. 481.

[23]See "Strategicheskaya tsel'," *VES*, p. 710.

[24]Although an early (mid-1970s) volume of the *Sovetskaya voyennaya entsiklopediya* indicated that first operations (*pervyye operatsii*) would be defined in Vol. 6, the definition appears neither in that nor any other volume of the *SVE*; nor does one find it in the *VES*.

[25]Soviet military writers continue to revise the number of strategic operations in World War II. Just after the war, they recognized 20 such operations; in the 1960s, 40; and in the 1970s, 55. More recently, a leading military history journal proposed for discussion a list of 52; see Maj. Gen. V. V. Gurkin and M. I. Golovnin, "On the Matter of Strategic Operations in the Great Patriotic War of 1941-1945," *Voyenno-istoricheskiy zhurnal*, No. 10, October 1985, pp. 10-23. The discussion of this list begins in the journal's April 1986 issue, pp. 48-52.

> continental TVD, each front (army group) may carry out two or more consecutive front (army group) operations. A strategic operation may also have a defensive objective, and it may be carried out to repulse an attack from the air or outer space.[26]

A strategic operation in a NATO-WP war would consist of two or more consecutive front operations. A single front would probably have an average depth of operation of 300 to 400 kilometers (the average depth at the end of World War II). The entire operational depth of NATO defenses in the Central Region amounts to 400 to 600 kilometers.

In a conventional war, two consecutive front operations in the Western TVD theoretically would enable Warsaw Pact forces to reach the Atlantic on a broad front (see Fig. 4). The Soviets would seek to achieve this objective in a blitzkrieg offensive lasting perhaps three to four weeks. Its accomplishment would signal (1) the end of the first strategic operation; (2) the realization of the immediate strategic objective; and (3) the end of the initial period of war.

Thus, the Western TVD would have the major responsibility for carrying out the first strategic operation that would achieve the primary strategic objective of the initial period of war.

Preparation of Western TVD

In light of the important role assigned to the Western TVD, this theater undoubtedly is now or would on the eve of a war in Europe be characterized by the following:

- A high degree of combat readiness, especially of the major field forces and formations assigned to execute the initial strategic operation
- A large contingent of forces, operating under the high command of the Western TVD, to give the Warsaw Pact a huge numerical advantage over NATO forces to support a blitzkrieg offensive on selected main axes of attack

[26] See "Strategicheskaya operatsiya," *VES*, p. 710.

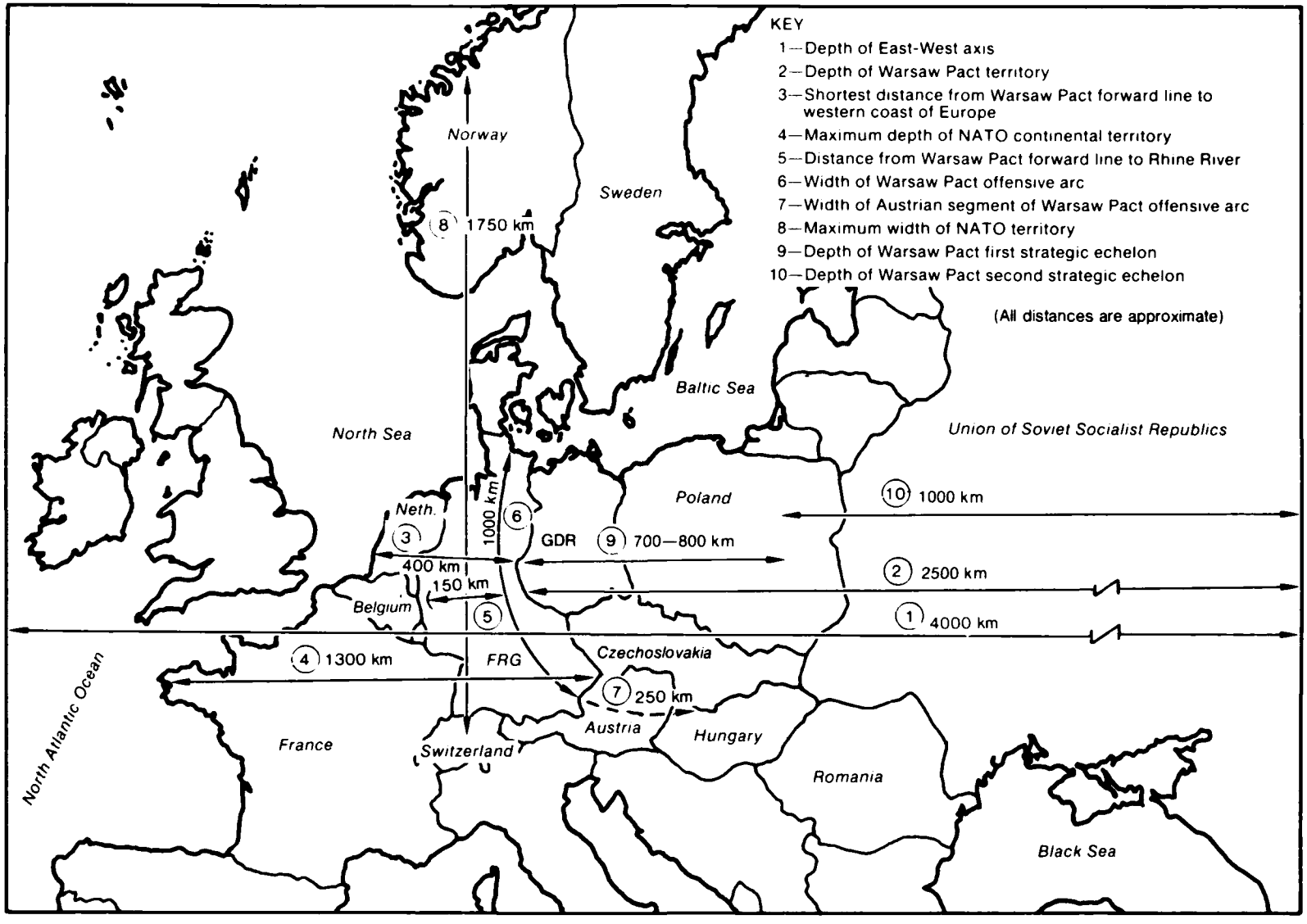

Fig. 4—Major strategic distances in Western TVD

- A variety of armed services and combat branches to conduct the initial strategic operation both in a conventional and a nuclear war
- Technologically advanced troops capable of challenging NATO's purported qualitative advantage
- A geographic span of the entire area and depth of the planned hostilities
- A high degree of operational autonomy
- The support of a large percentage of the strike reserve forces of the reserves of the Supreme High Command (in addition to the strike reserve forces of the Western TVD)
- The establishment in peacetime of a centralized high command of the TVD to direct all WP forces in the forward and rear areas
- Thorough and sound preparation of the TVD, including an engineering system; command, control, and communication; logistics; and technological, organizational, and other measures to ensure the effective commitment of the armed forces to war and the successful conduct of the fighting[27]
- The selection of a senior Soviet marshal as TVD commander in chief.[28]

STRATEGIC ECHELONMENT

Echelonment, or phased disposition in depth, constitutes an integral part of Soviet-Warsaw Pact doctrine for land warfare and force generation. Echelonment takes place at the strategic, operational, and tactical levels. Strategic echelonment involves only the front level and above.

The current peacetime disposition in Europe is based on four categories of strategic echelonment:

[27]For changing views on this subject, see Michael Sadykiewicz, *Die Sowjetische Militaerdoktrin und Strategie* (Soviet Military Doctrine and Strategy), Bernard & Graefe Verlag, Koblenz, 1985, pp. 99-104.

[28]The leadership of the Western TVD is discussed in "High Command," Sec. III, below.

- First strategic echelon, consisting of first- and second-echelon fronts
- Second strategic echelon, consisting of third-echelon fronts
- Area of intermediate strategic reserves
- Area of deep strategic reserves.[29]

Figure 5, depicting the evolution of Soviet strategic echelonment since the beginning of World War II, indicates steady increases in (1) the depth of the overall strategic echelonment; (2) the number of elements within the overall strategic echelonment; (3) the depth of the first strategic echelon;[30] and (4) the number of fronts disposed in depth.

The present four categories of Soviet-Warsaw Pact strategic echelonment would serve in both peace and war. While the main missions of each echelon would not change during the course of a war, the peacetime and wartime composition and geographic disposition of the four echelons would differ substantially. Forces are or would be assigned to one of these echelons based on their readiness to fight and the time of their scheduled commitment to battle, rather than on their peacetime location and subordination.

First Strategic Echelon

The first strategic echelon consists of forces slated to execute the first (initial) strategic operation. Forces deployed in the area of the first strategic echelon but not tasked to participate in the first strategic operation are not considered an integral operational element of the first strategic echelon.

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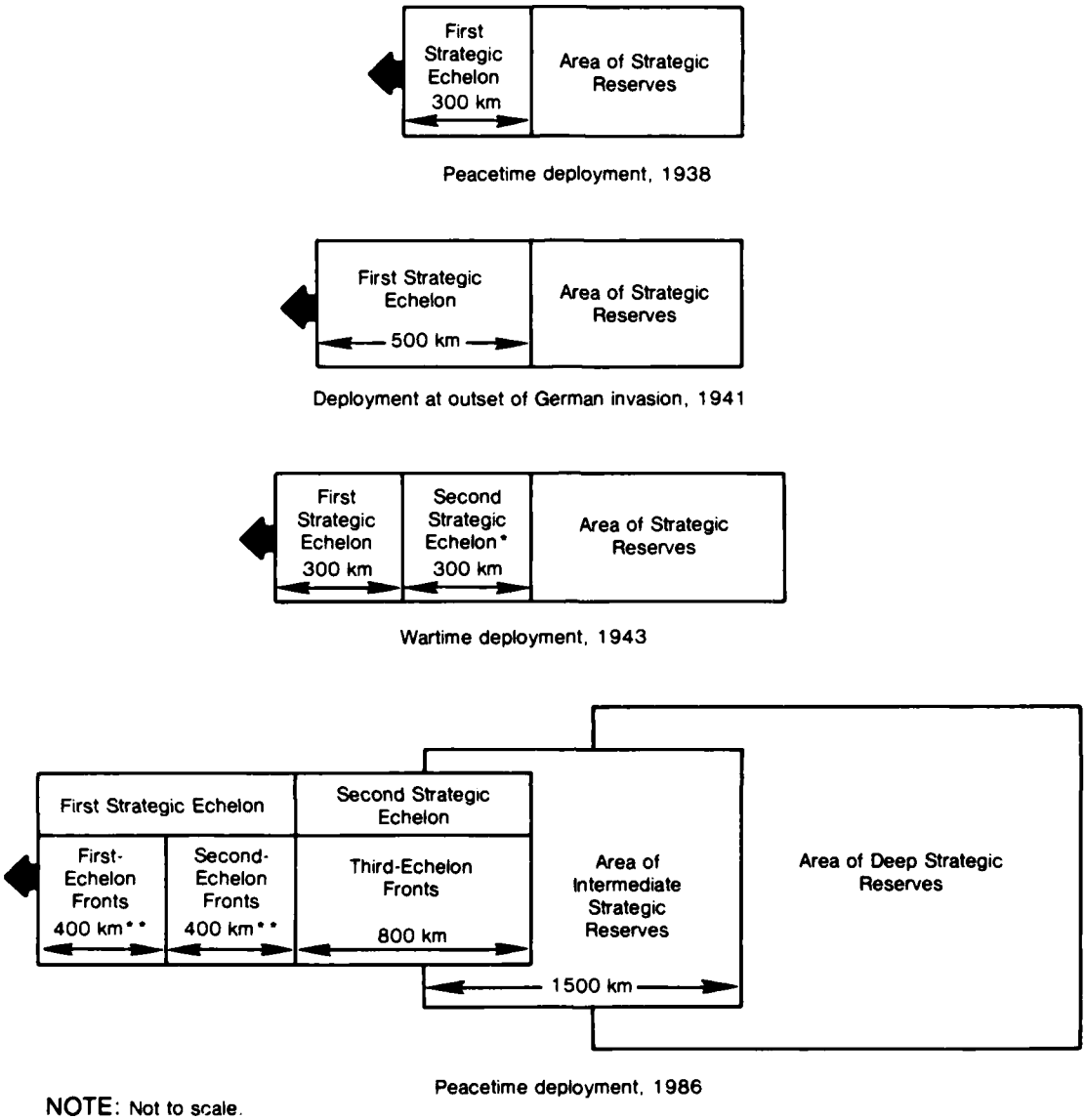
[29] General Bernard W. Rogers, "Follow-On Forces Attack (FOFA): Myths and Realities," *NATO Review*, No. 6, December 1984, p. 2, recognizes the first two strategic echelons, which he calls first-echelon fronts and second-echelon fronts, but combines the reserve echelons into a third echelon, which he designates theater reserves.

[30] In World War II, the rear boundary of the individual front constituted the rear boundary of the first strategic echelon. On main strategic directions of the 1980s, the first strategic echelon would include both first- and second-echelon fronts. The rear boundary of the second-echelon front, therefore, would mark the rear boundary of the first strategic echelon.



NOTE: Not to scale.

* Only during battle of Kursk
** On average; fronts may extend 250 to 450 km

Fig. 5—Evolution of Soviet strategic echelonment in European theater

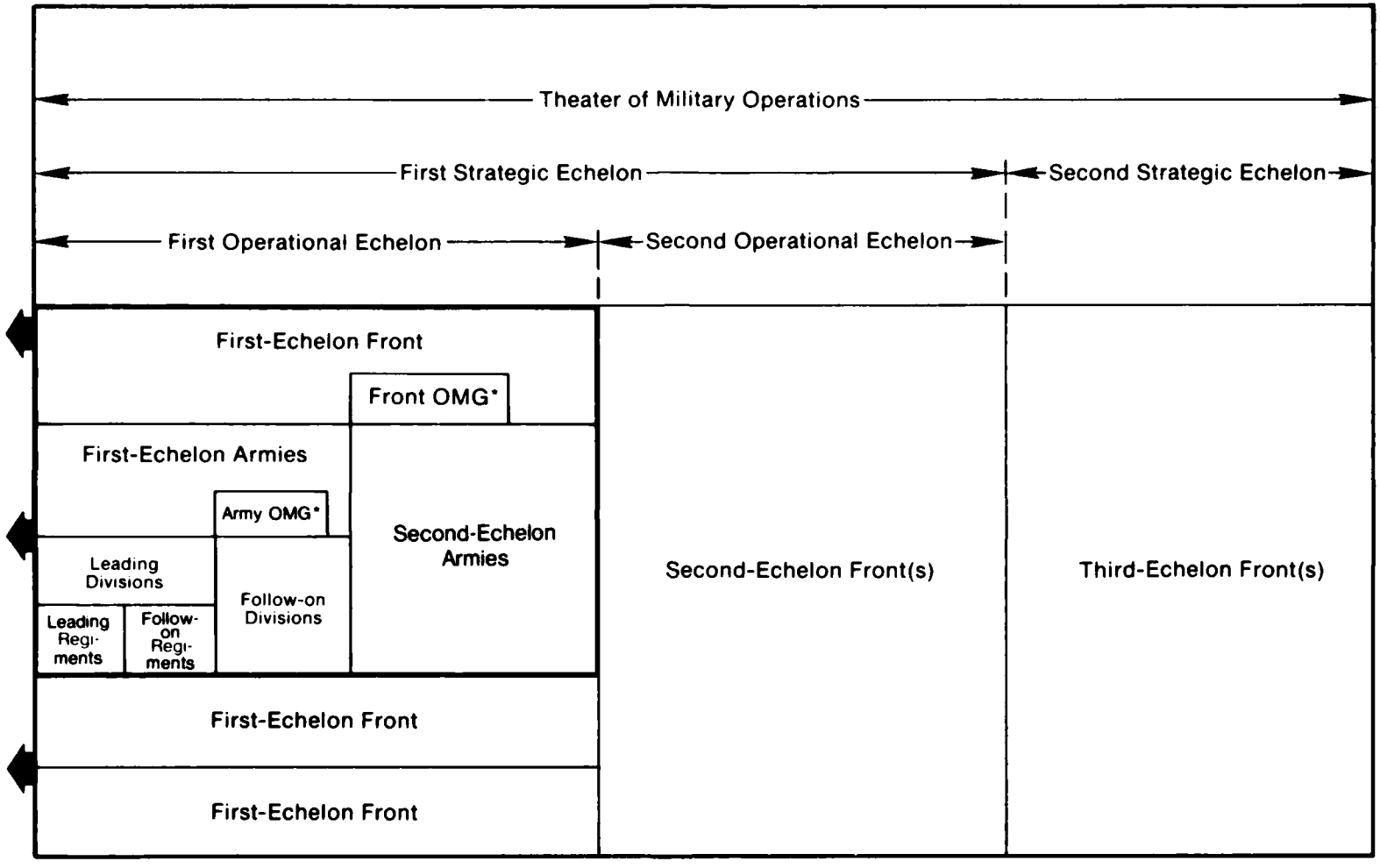
Certain Polish ground force divisions, for example, might be included in either the first or the second strategic echelon, depending on their relative combat readiness and scheduled introduction into battle. Should these troops be slated for employment in the initial fighting, they would be deployed forward into the German Democratic Republic (GDR) on the eve of a war as part of the first strategic echelon. Those stationed east of the Vistula River might be assigned to the second strategic echelon. Czechoslovak troops deployed in eastern Czechoslovakia might be similarly employed.

Soviet war plans undoubtedly provide for various mobilization, deployment, and force application assumptions. Selected formations now deployed in the western USSR military districts (Baltic, Belorussian, and Carpathian) might also, according to some plans, move into Eastern Europe and then into NATO territory to take part in the first strategic operation. These forces might include several airborne divisions and/or fully combat-ready divisions, such as those of the 11th Guards Army, headquartered in Kaliningrad (Baltic MD).[31]

Ground force units of the first strategic echelon would be organized into armies. Three to five armies would form a front. Three or four fronts might spread across the width of the Western TVD from the Baltic coast in the north to the Austrian border (or perhaps through Austria to Yugoslavia and Italy) in the south.

The fronts of the first strategic echelon would constitute two operational echelons at various depths from the line of contact with NATO (see Fig. 6). Fronts of the first operational echelon (first-echelon fronts) would participate in the opening offensive. They would be backed by a second operational echelon (second-echelon fronts), composed largely of the most combat-ready forces in the western USSR military districts; the leading elements of these forces would begin to move forward a few days after mobilization. In contrast to the order of battle of World War II, however, during which only four backup fronts

[31]See David C. Isby, *Weapons and Tactics of the Soviet Army*, Jane's Publishing Inc., London, 1981, p. 25. Also see below, Sec. III, "Force Composition."



*Operational maneuver group; see Sec. IV, below.

Fig. 6—Notional strategic echelonment of main strategic direction

were activated, none for longer than three months,[32] the command arrangements for a future conflict, especially one fought in Europe, envisage the widespread establishment of second-echelon fronts to back the first-echelon fronts.

On the main strategic directions or main axes of attack, one second-echelon front would back up two or three first-echelon fronts. On the secondary directions, the ratio would be one second-echelon front to four or five first-echelon fronts. The forces of each second-echelon front would most likely be committed to action simultaneously, rather than sequentially.[33] In some cases, independent armies directly subordinated to the theater or to the Stavka VGK, rather than second-echelon fronts, would serve as the critical follow-on force elements.

Second-echelon fronts would carry out tasks similar to those conducted by second-echelon armies in World War II, but at a higher level. The TVD commander in chief would assign such tasks on the basis of a general offensive plan developed by the TVD high command following guidelines provided by the General Staff and approved by the Stavka VGK. The tasks might include the creation of new attack axes on the flanks, the seizure of subsequent strategic objectives during the initial period of war, and the replacement of troops and commands of the first-echelon fronts in the event of high attrition and/or escalation to theater nuclear conflict.

Recognizing the potential threat of NATO deep-attack capabilities to their second-echelon forces in the initial period of war, Warsaw Pact planners are currently grappling with what a military expert writing in the Polish defense ministry daily called "the battle for the commitment to action of the troops."[34] Marshal Kulikov described the threat thus:

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[32]These were the Reserve Front in 1941 and 1943 and the Steppe and Donskoy fronts in 1943. See *VES*, "Donskoy front," p. 242; "Rezervnyy front," p. 630; and "Stepnoy front," p. 708.

[33]Marshal of the Soviet Union Ivan S. Konev, who headed the second-echelon Steppe Front in 1943, warned that "strategic reserves in the shape of an entire front should be allocated to hostilities only as a complete entity, and committed on the most important strategic axes of the TVD." See I. S. Konev, *Zapiski Komanduyushchego frontom 1943-45 gg.* (Notes of a Front Commander 1943-45), Voyennoye Izdatel'stvo, Moscow, 1981, p. 19.

[34]Col. Dr. Teofil Wojcik, "Trudna sztuka dowodzenia" (The Difficult Art of Comand and Control), *Zolnierz Wolnosci,* No. 90, 1983, p. 3.

> The NATO high command believes that it will be able, at the outbreak of the war, using various fire means, to simultaneously strike the forces of the Warsaw Pact to their entire operational depth, including second echelons and reserves, *even before they are committed to battle*.[35]

Kulikov noted also that NATO envisages air-land operations that would strike to a depth of "up to 300 kilometers"[36]--i.e., the entire depth of the first-echelon fronts.

The NATO deep-attack means to which Kulikov referred would present a threat to the Soviets in both conventional and, especially, nuclear and chemical warfare. These means combine high-technology surveillance, assessment, and attack capabilities to hold at risk a wide range of WP second-echelon forces, logistic support, and reserves located in their own rear areas. One may conclude, therefore, that the Soviets would deploy the forces of the second-echelon fronts well beyond 300 kilometers behind the line of contact. This deployment would avoid such NATO conventional attacks before the forces moved forward and thus would minimize the losses that they would otherwise incur before being committed to battle.

The various WP military services and branches would be expected to (1) secure the timely movement of forces both within and between fronts by road, rail, sea, inland waterway, and air; (2) assist the safe transit of these forces across the first-echelon battle area by actively combating enemy aviation, surface-to-surface missile (SSM) units, and long-range artillery (LRA) forces; (3) ensure air, antiairborne, and antidiversionary defense; and (4) secure, by fire preparation and other means, the commitment of these forces to action.

During World War II, these four operations were planned, controlled, and supported at the strategic level by the Soviet General Staff, but conducted by individual divisions and/or armies. The operations were executed up to and including the army level. Now that the NATO forces have achieved the capability to attack throughout the

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[35] *Krasnaya zvezda*, February 21, 1984, p. 3 (emphasis added).
[36] Ibid. See also *Soviet Military Power 1987*, pp. 63-64.

entire depth of the WP forces, a capability that might significantly alter the topography of the battlefield, WP forces would have to plan and carry out their battle for the commitment to action of the second echelons at the front and TVD level.

Although the Soviets speak of fronts as organizations to be created or activated in time of crisis or war, front headquarters have existed in effect for some 30 years. The commands of the three groups of Soviet forces in Eastern Europe and of the western military districts regularly fulfill the functions of front headquarters in command post exercises. The command of the Group of Soviet Forces, Germany, presumably also exercises in preparation to assume the role of headquarters staff for the high command of the Western TVD. Front-level formations and units, as well as front-level units of the Rear Services, have existed since the end of World War II. Their strategic deployment over a long period in peacetime means that they would be ready for immediate operational deployment, the first step in the initiation of hostilities.

Second Strategic Echelon and Strategic Reserves

The second strategic echelon is composed largely of (1) understrength, less combat-ready divisions stationed primarily in the Baltic, Belorussian, and Carpathian military districts and in eastern Poland and Czechoslovakia and (2) reserve divisions to be established on mobilization day (M-day). These units, especially the latter, would not be ready for battle until they had been filled out and trained for several weeks; the least ready units might even take months.

After reaching combat strength and readiness, units of the second strategic echelon would form a third echelon of armies and fronts for employment as another wave of follow-on forces. They would enter the war in Europe in the fourth or fifth week after mobilization, that is, after the WP first strategic operation had been completed. This echelon would also include the air-defense organizations that protect ground force units and other military forces and urban-industrial concentrations in the western military districts.

The intermediate strategic reserves for the Western TVD consist of forces stationed in the European USSR that may be made available to the commander of the Western TVD or tasked to support theater operations.

The Stavka VGK would authorize these units to provide the support requested by the high command of the Western TVD. The forces include certain ground and air force units of the Kiev Military District, the medium- and intermediate-range, and possibly selected intercontinental-range, ballistic missiles of the Strategic Rocket troops that are targeted to support a nuclear campaign in the Western TVD, medium- and intermediate-range bombers of the Smolensk, Legnica, and Vinnitsa air armies, airborne divisions, airlift assets from a corps of military transport aviation, and other special reserve forces.

The deep strategic reserves consist of forces that could be made available to the commander of the Western TVD, should the Stavka VGK deem this necessary. These strategic reserves include ground and air units of the Moscow, Ural, and Volga military districts and other formations directly subordinate to the reserves of the Supreme High Command.

III. WESTERN TVD FORCE AND COMMAND STRUCTURE

GEOGRAPHIC AND MILITARY SCOPE

The Western TVD, as configured for an initial strategic offensive in a conventional war, encompasses an area of approximately 4.183 million square kilometers, including some 2.783 million square kilometers of land and 1.4 million of sea (see Fig. 3, above, and Table 2). It has a population of about 346 million.

NATO and WP Commands

The NATO commands opposing the Warsaw Pact forces in the Western TVD include the following crucial elements of the allied defense system:[1]

Table 2

LAND AREA AND POPULATION OF WESTERN TVD

	Area		Population	
	Sq Km (thousand)	% of Total	People (million)	% of Total
Warsaw Pact countries				
USSR	845		60	
Eastern Europe	549		68	
Total	1394	50	128	37
NATO countries	1039	37	200	58
Neutral countries[a]	350	13	18	5
Total	2783	100	346	100

[a]Only land areas of Western TVD, as shown in Fig. 3.

[1]See *NATO's Fifteen Nations*, Special Issue No. 2, 1981, especially Gen. Dr. Ferdinand von Senger und Etterlin, "Defence of Central Europe. The Challenge of the 1980s," pp. 16-23. See also "The NATO Command

- In Allied Command Europe (ACE)
  - -- The entire operational area of Allied Forces Central Europe (AFCENT) in the NATO Central Region, including both the Northern and Central army groups (NORTHAG and CENTAG) and their associated second and fourth allied tactical air forces (2ATAF and 4ATAF), which together constitute the Allied Air Forces Central Europe (AAFCE)
  - -- Much of the operational area covered by the Allied Forces Northern Europe (AFNORTH), including southern Norway (Allied Forces South Norway), Denmark, the Allied Forces Baltic Approaches (BALTAP), and the Joint Command of Schleswig-Holstein (LANDJUT)
  - -- UK Air Forces Command (UKAIR)
  - -- NATO Airborne Early Warning and Control Force (NAEW)
  - -- Allied Command Europe Mobile Force (AMF)
- In Allied Command Atlantic (ACLANT), some wartime subordinate commands, or parts of their area of responsibility (for example, the Eastern Atlantic and Striking Fleet Atlantic commands and Submarines Allied Command Atlantic)
- Allied Command Channel (ACCHAN)--entire area of responsibility
- French national high command, including all French armed forces in northern France and in Germany, among them the II Corps, consisting of three divisions, and the French tactical air force (FATAC).

On the Warsaw Pact side, the Western TVD, with forward headquarters at Wuensdorf, East Germany,[2] probably includes the following peacetime elements of the Soviet armed forces and the armed forces of its Eastern European allies:

Structure," *NATO Handbook*, NATO Information Service, Brussels, 1985, pp. 56-57.

[2]Also the headquarters of the Group of Soviet Forces, Germany.

- Soviet forces in Eastern Europe
  - -- Group of Soviet Forces, Germany (GSFG)--in East Germany
  - -- Northern Group of Forces (NGF)--in Poland
  - -- Central Group of Forces (CGF)--in Czechoslovakia
  - -- Southern Group of Forces (SGF)--in Hungary[3]
- Military districts (MDs) in the western USSR[4]
  - -- Baltic MD
  - -- Belorussian MD
  - -- Carpathian MD
  - -- Some forces of the Kiev MD
- Soviet Navy
  - -- Baltic Fleet
  - -- Northern Fleet (selected elements)
  - -- North Sea Zone of Naval Operations (in wartime only)
- Soviet air-defense (PVO) troops in the Minsk and Kiev air-defense districts[5]

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[3]In the event that the initial strategic operation involved a major attack through Austria.

[4]Soviet armed forces inside the USSR are organized into 16 MDs. See Ulrich-Yoachim Schulz-Torge, "The Soviet Military High Command" (Part II), *Military Technology,* September 1985, pp. 107-111, for a map of the MDs and a list of their top personnel. See also *Soviet Military Power 1986,* U.S. Department of Defense, U.S. Government Printing Office, Washington, D.C., March 1986, p. 18, and Harriet Fast Scott and William F. Scott, *The Armed Forces of the USSR,* 2d ed., Westview Press, Boulder, Colo., 1981, pp. 173-200.

[5]See Mark L. Urban, "Major Reorganization of Soviet Air Forces," *International Defense Review*, No. 6, 1983, p. 756, and *The Military Balance 1985-1986*, International Institute for Strategic Studies (IISS), London, 1985, p. 23. Both sources say that air-defense forces are organized into five air-defense districts. According to Urban, p. 756, "Whereas previously these [air-defense districts] were part of a national command system, they are now subordinated to the theater headquarters. Each of the TVD commanders now has a deputy for PVO responsible for air defense throughout the theater. The PVO has also taken over FA [front aviation] fighter divisions and integrated them into the air-defense system. PVO antiballistic missile, ballistic-missile early warning and antispace forces are not of course assigned to these theater commands."

- Polish ground, naval, air, and air defense forces
- GDR ground, naval, air, and air defense forces
- Czechoslovak ground, air, and air defense forces
- Hungarian ground, air, and air defense forces (in the event of a major NATO attack through Austria).

The Western TVD would encompass the following Western European countries in an initial strategic offensive in a conventional war (as shown in Fig. 5, above):

- Belgium
- Denmark
- Federal Republic of Germany
- France (northern part)
- Netherlands
- Norway (southern part)
- United Kingdom

and the following neutral areas:

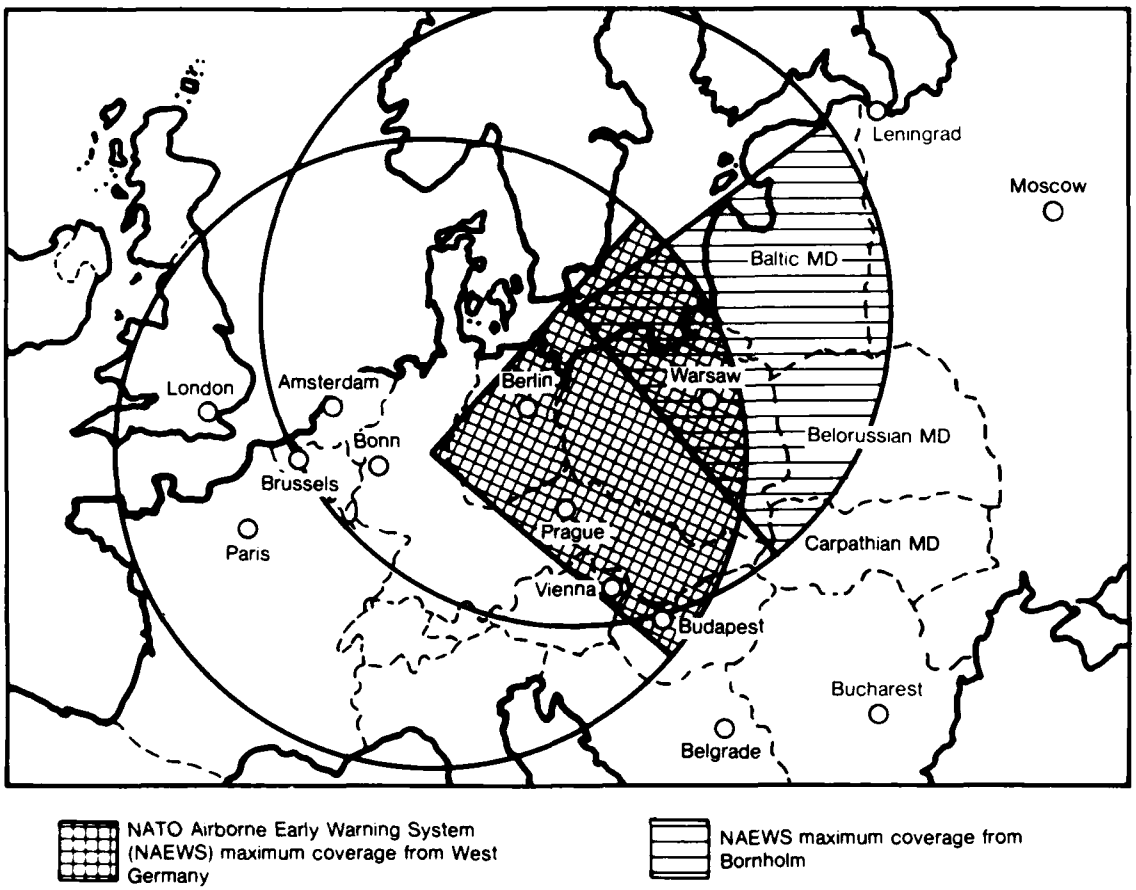
- Southern Sweden, including Oland and Gotland islands
- Northern Austria, including Vienna, Linz, and Salzburg
- Northwestern Switzerland, including Zurich, Bern, and Geneva
- Republic of Ireland.

Core Areas

The Warsaw Pact and NATO divide the European Theater of War into somewhat different regions and theaters of military operations. Specifically, NATO includes in AFNORTH, its northernmost command, several areas that the Warsaw Pact places in its centrally located Western TVD, rather than in its Northwestern TVD.

Denmark, the Danish approaches to the Baltic sea, and the Schleswig-Holstein region, which the Warsaw Pact probably considers to be in the Western TVD and NATO places in AFNORTH, are of major strategic significance to both sides (see Fig. 3, above). By occupying Denmark, the Warsaw Pact forces would, to the disadvantage of NATO,

- Close the Baltic Sea to the NATO fleet
- Block the exit route of NATO warships and merchantmen caught in the Baltic at the onset of hostilities and thus facilitate their destruction or capture
- Deny NATO the use of its easternmost base (including the island of Bornholm) for the surveillance of Warsaw Pact territory (Fig. 7 shows the advantage of surveillance from Bornholm over surveillance from West Germany)



NATO Airborne Early Warning System (NAEWS) maximum coverage from West Germany

NAEWS maximum coverage from Bornholm

SOURCE: Based on map showing coverage from West Germany in *NATO's Fifteen Nations*, Special Issue No 2, 1981, p 21

Fig. 7—NATO surveillance capabilities from Bornholm and from West Germany

- Deny NATO a base for the defense of Western Europe, both to secure AFCENT's coastal flank and to receive replacements and reinforcements from the United States and United Kingdom
- Disrupt, and possibly deny, close strategic interaction between AFNORTH and AFCENT
- Open the gateway to the North Sea and Atlantic Ocean to Warsaw Pact naval forces in the Baltic.

The WP occupation of Denmark would, at the same time,

- Secure the right, coastal flank of Warsaw Pact armies driving toward Holland and Belgium via northern Germany
- Create a convenient launching pad for WP air- and sea-landing operations against Norway
- Place Sweden in check politically
- Provide an ideal launch area for an attack against Sweden in the event of a Warsaw Pact decision to invade that country, either in the initial or a subsequent phase of a war in Europe.

From Moscow's point of view, the strategic advantages to be gained by seizing Denmark would directly benefit WP armies attacking in northern Germany. Therefore, the Soviets almost certainly include Denmark, the Baltic approaches, and Schleswig-Holstein in the Western TVD area of responsibility. The easiest way to capture these areas would be from the direction of northern Germany.

From the NATO vantage point, however, these areas belong in AFNORTH, rather than AFCENT. NATO commanders would be better able to direct defensive operations, for example, in the Baltic approaches and southern Norway from Kolsaas, the AFNORTH Headquarters near Oslo, than from Brunssum, the AFCENT Headquarters in the Netherlands, or from some wartime location in central Germany.

The WP forces would also not be able to gain air and naval control in the Baltic approaches without neutralizing NATO forces in southern Norway. They could most easily approach this task from Danish territory after capturing the northern part of that country. Moreover, the Warsaw

Pact Baltic fleets, undoubtedly an integral part of the Western TVD, could not easily be divided into task forces to support the Western TVD and to battle NATO forces in the Skagerrak. Finally, the Soviets would have difficulty creating a separate high command subordinated directly to Moscow to oversee an assault on Denmark and southern Norway.[6]

A large-scale air- and sea-landing operation against southern Norway would probably not be launched from the Western TVD during the initial strategic operation.[7] During the second or third strategic operation in Europe, however, the Soviets might invade southern and central Norway and, possibly, Sweden.

Should the Soviets decide to invade Norway and Sweden to extend the defense perimeter protecting the militarily vital Kola Peninsula, the task might fall to the Northwestern TVD (or to an independent Northern European or Northwestern front directly controlled by the Stavka, should the attack be confined to Norway).[8] Obviously, then, Soviet Northern Fleet units operating in the North Sea in the first strategic operation would come under the control of the Western TVD. Therefore, the North Sea, which in wartime would constitute a zone of naval operations, would also likely be included in the Western TVD.

Outlying and Neutral Areas

Warsaw Pact forces almost certainly would not try to invade the United Kingdom by air and sea during the initial strategic operation. From the outset of hostilities, however, they would direct air and possibly conventionally armed missile attacks on the most important UK strategic targets, including launch sites for nuclear delivery systems,

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[6]See Viktor Suvorov, *Inside the Soviet Army*, Hamish Hamilton, London, 1982, p. 130.

[7]In that stage of war, a land-sea operation would be much more likely in the northern part of Norway. Such a landing might be directed by an independent front based on the Leningrad MD and subordinated to the Stavka.

[8]The Soviets have not yet appointed a high command of the Northwestern TVD. In wartime, the high command of the Leningrad MD would probably constitute the high command of the Northwestern TVD, and forces of the Leningrad MD would operate under the Northwestern TVD high command.

nuclear weapon storage sites, airfields, ports, major force concentrations, and key command posts. The high command of the Western TVD, which would be responsible for operations on the land and sea areas and airspace of the United Kingdom, would direct the attacks.

In the event of a major war in Europe, Moscow would probably seek to neutralize France. Should French forces not participate in a NATO response to a WP aggression, one may assume that the Soviets would not attack France. The Warsaw Pact would benefit greatly from not having to combat French forces during the initial strategic operation. Nevertheless, WP war plans must take into account the possibility that France would fight on NATO's side from the outbreak of war. Therefore, this study includes northern France in the area of responsibility of the Western TVD.

Among the neutral countries within the boundaries of the Western TVD, Austria would likely be invaded at the outbreak of a war in Europe to enable Soviet troops to turn back the southern flank of NATO's CENTAG troops deployed in Bavaria. Sweden, Switzerland, and Ireland would be considerably less threatened during the initial strategic operation. Nonetheless, they are assumed to be part of the Western TVD for purposes of WP reconnaissance and as potential battle areas.

Eastern Europe and USSR

Western analysts generally agree that the Western TVD includes the German Democratic Republic (GDR), Poland, and Czechoslovakia (i.e., the Warsaw Pact northern tier), the Baltic Sea, and the Belorussian Military District in western USSR. The assignment of Hungary to the Western TVD is problematic. The Soviet and Hungarian national forces in Hungary might be called upon to participate in a WP offensive to rout Austrian forces and then attack West German and U.S. troops in Bavaria along the southern flank of the NATO Central Region.

Some analysts also include the Baltic, Carpathian, and even the Kiev MDs in the Western TVD.[9] Others place the Baltic MD in the

[9] *Soviet Military Power 1986*, p. 12, appears to include the Baltic and Belorussian MDs, but not the Carpathian and Kiev MDs, in the Western TVD. Schulz-Torge, "The Soviet Military High Command" (Part II), p. 103, includes the Baltic, Leningrad, and Belorussian MDs. Viktor

Northwestern TVD. In my view, most combat-ready Baltic MD formations could either take part in the first strategic operation, or remain in the reserve as an integral part of the Western TVD.

Troops of the Carpathian MD, which is the only military district in the western USSR that trains soldiers for mountain warfare, could readily deploy to either the Southwestern TVD or the Western TVD. Indeed, the latter case would be more likely, especially during the first strategic operation.

Forces from the Kiev MD would probably support the Southwestern TVD, but some might also go to the Western TVD.[10] Or, forces from the Carpathian and Kiev MDs might be divided between the adjacent theaters, with some divisions and armies going to the Southwestern TVD and others to the Western TVD. I believe that the main plan (*variant*) drawn up by the Soviet General Staff for the first strategic operation of a war limited at least initially to Central Europe would incorporate most forces of both the Carpathian and Kiev MDs in the Western TVD.

Suffice it to say that the geographic scope of the Western TVD, as shown in Fig. 3, above, represents only the period of a first strategic offensive operation that the Western TVD might conduct using conventional arms. These boundaries would undoubtedly change either during or following that operation. In short, these boundaries include the area of *fire influence,* that is, the area in which firepower could be brought to bear by means that would be directly or indirectly available to the high command of the Western TVD. The much broader area

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Suvorov apparently includes the Leningrad, Baltic, Belorussian, Carpathian, and Kiev military districts in what he calls the Western TVD (and what I call the Western theater of war). See "Strategic Command and Control: The Soviet Approach," *International Defense Review*, No. 12, 1984, pp. 1814, 1817. The boundaries of the Western TVD described here also differ considerably from those shown in Lt. Col. John G. Hines and Phillip A. Petersen, "The Soviet Conventional Offensive in Europe," *Military Review*, No. 4, 1984, pp. 2-29. See also Hines and Petersen, "The Warsaw Pact Strategic Offensive: The OMG in Context," *International Defense Review*, No. 10, 1983, pp. 1391-1395; and "The Conventional Offensive in Soviet Theater Strategy," *Orbis*, Fall 1983, pp. 695-739.

[10]General of the Army Ivan A. Gerasimov headed the Kiev MD before taking command of the Southwestern TVD in 1984. See Schulz-Torge, "The Soviet Military High Command" (Part II), pp. 103-104. The Kiev MD is therefore assumed to be linked to the Southwestern TVD.

of *interest* of this high command is not shown.[11] During a first strategic offensive operation, the countries depicted as falling within the area of fire influence of the Western TVD (with the possible exception of France and the neutral countries) would be attacked by Soviet and WP missiles (with conventional warheads), aircraft, artillery, helicopters, warships, paratroops, diversionary units, etc.

FORCE COMPOSITION

The forces and command arrangements of the Western TVD, depicted in Fig. 8, indicate a strong, autonomous grouping of Soviet-Warsaw Pact forces. This organization would apply only during the immediate prewar period and the initial period of war, after which it would change substantially. The command arrangements would include both forces under the general control of the Western TVD high command (for example, the fronts) and those only under its operational control.

Formations Under General Control of Western TVD High Command

Fronts of the First Strategic Echelon. During the initial period of a large-scale war in Central Europe, Soviet-WP forces in the Western TVD would face NATO forces along a line of contact about 1000 kilometers long (see Fig. 4, above). This line could accommodate up to four 250-kilometer-wide fronts in the first echelon, operating abreast. Some of these fronts would be much stronger than others, and their frontages would likely vary.

The first strategic echelon of the Western TVD would probably also have from one to three second-echelon fronts during the initial period of war (see Fig. 6, above). The main mission of these fronts would be to exploit the success achieved by the first-echelon fronts. Once committed to action on the main axes, the second-echelon fronts would seek to achieve the subsequent objectives of the initial strategic operation and thereby accomplish the missions established for the initial period of a war in Europe.

[11]The areas of influence and interest are defined in U.S. Department of the Army, Headquarters, *Operations*, FM 100-5, Washington, D.C., August 20, 1982, pp. 7-15 and 7-16.

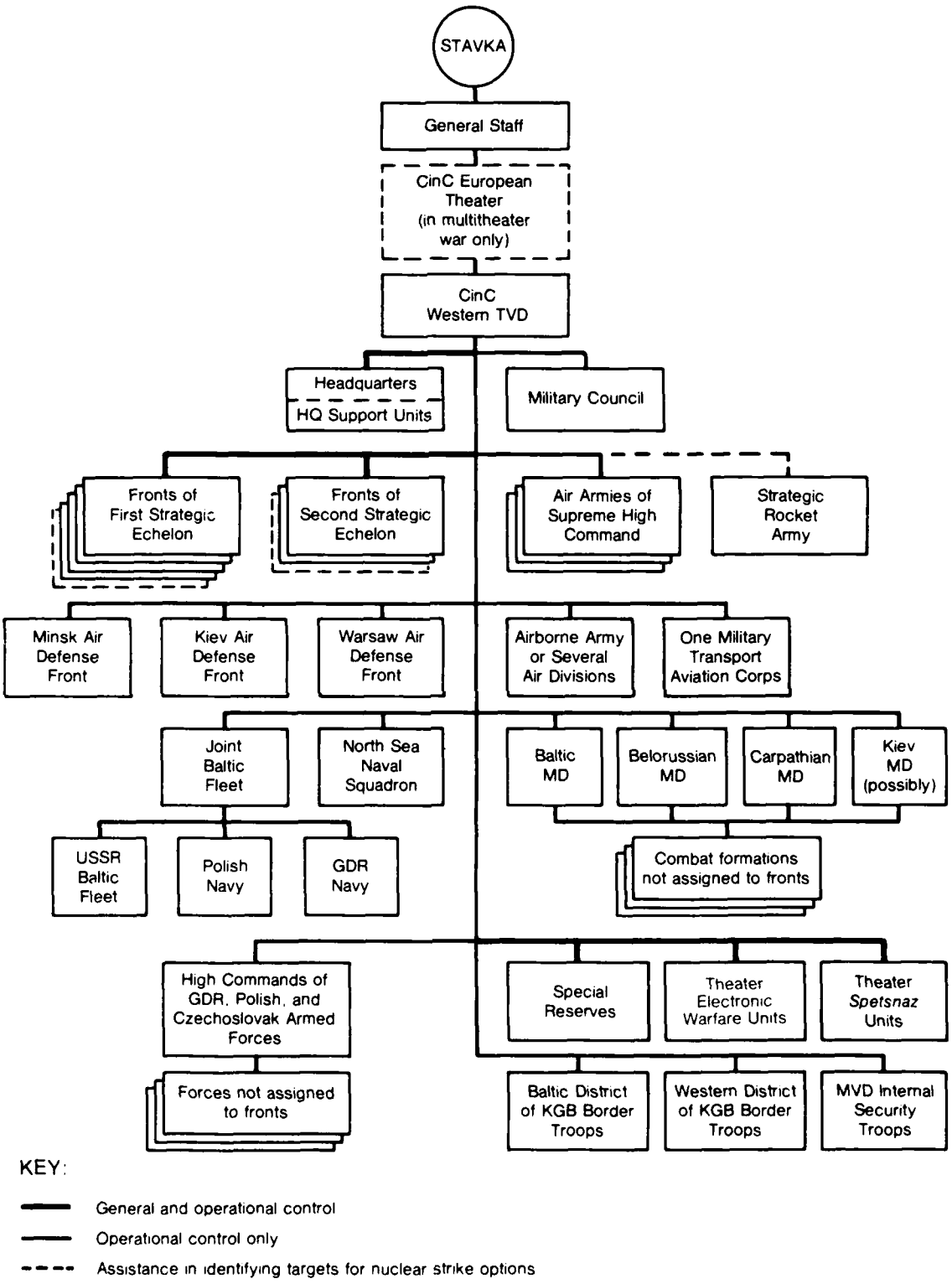

Fig. 8—Notional initial wartime composition of Western TVD

Fronts of the Second Strategic Echelon. At the outset of hostilities, a third echelon of fronts, consisting of divisions from Eastern Europe and military districts in western USSR, might also be established. These fronts, together with other formations, would constitute the second strategic echelon. Their deep deployment and lower readiness would, of course, delay their introduction into battle until at least 30 days after mobilization.

Special Reserves. Special reserves would consist of combat-ready formations and units of tank troops, artillery, rocket troops, and other general purpose forces. At the close of World War II, approximately half of all Soviet artillery, tank troops, and military aviation were the reserves of the Supreme High Command.[12] In a modern war, such reserves would likely constitute only 20 to 25 percent of the total.[13]

Most special reserves, especially in the European Theater of War, would be at the disposal of TVD high commands to reinforce important axes of the fronts. Although originally part of the reserve of the Supreme High Command, most such reserves would be temporarily subordinated to the commander in chief of the TVD. He would be entitled to use them without any limitations and to divide them and subordinate different elements of these formations to the various front commanders.

Theater Electronic Warfare Units. The Soviets field a wide variety of airborne and ground-based radio-electronic combat forces that perform many kinds of electronic warfare (EW). The TVD would have direct access to units specializing in electronic countermeasures (ECM), to jam enemy radars and communications; electronic counter-countermeasures (ECCM), to

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[12]See Marshal of Tank Troops O. A. Losik, *Stroitel'stvo i boyevoye primeneniye sovetskikh tankovykh voysk v gody velikoy otechestvennoy voyny* (Organization and Combat Employment of Soviet Tank Troops During the Great Patriotic War), Voyenizdat, Moscow, 1979, p. 72; Col. I. V. Timokhovich, *Operativnoye iskusstvo sovetskikh VVS v velikoy otechestvennoy voyne* (The Operational Art of the Soviet Air Force in the Great Patriotic War), Voyenizdat, Moscow, 1976, p. 312; and "Artilleriya," *SVE*, Vol. 1, 1976, p. 177.

[13]During World War II, most Soviet artillery (including mortars and multiple rocket launchers [*katyushi*]) were assigned above the divisional level. Now, most artillery is an organic part of the maneuver divisions.

ensure friendly use of the electromagnetic spectrum; and electronic-warfare support measures (ESM), to intercept, identify, analyze, and locate hostile electromagnetic emissions to support both ECM and ECCM.[14]

Theater Diversionary Units. Soviet unconventional warfare, or diversionary, forces are organized into special-designation brigades or detachments (*brigady* or *otryady spetsial'nogo naznacheniya)*. They are commonly known in both the East and West as *spetsnaz* forces.[15] From the opening hours of a war, these forces would carry out sabotage, assassinations, and other disruptive operations in NATO rear areas.

Formations Under Operational Control of Western TVD High Command

Air Defense Fronts. Most of the five Soviet peacetime air-defense districts would be converted into air-defense fronts in time of war.[16] Four such fronts--the Western, Central, Southwestern, and Transcaucasus--were created in World War II.

The Western TVD would probably set up three air-defense fronts: the Minsk, based on the air-defense forces of the peacetime Minsk Air-Defense District; the Kiev, based on the Kiev Air-Defense District; and the Warsaw, based on the air-defense forces of Poland, the GDR, and Czechoslovakia. Each of these air-defense forces has a peacetime strength of an air-defense army. Soviet air force interceptor units

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[14]The three types of EW are described in detail in Stephen L. Johnson, "Soviet Electronic Warfare. A Review of Published Material," *International Defense Review*, No. 2, 1985 (Special supplement on electronic warfare), pp. 9-14. See also, Floyd D. Kennedy, Jr., "The Radioelectronic Struggle: Soviet EW Doctrinal Development," *Signal*, December 1984, pp. 59-63; and "Radioelektronnaya bor'ba," "Radioelektronnaya zashchita," Radioelektronnaya maskirovka," etc., *VES*, pp. 614-615.

[15]For an exhaustive description of these units, see Viktor Suvorov, "Spetsnaz: The Soviet Union Special Forces," *Military Review*, March 1984, pp. 30-46; and Suvorov, *Inside Soviet Military Intelligence*, Macmillan, New York, 1984, especially pp. 33-34 and 140-164. See also U.S. Army Training and Doctrine Command, *Soviet Army Specialized Warfare and Rear Area Support*, FM 100-2-2 (TBP FY84), Coordinating Draft, August 1982, U.S. Government Printing Office, Washington, D.C., 1984, pp. 5-4 to 5-7, and *Soviet Military Power 1986*,, p. 72.

[16]For a description of Soviet air-defense capabilities, see *Soviet Military Power 1986*, pp. 79-80, and *The Military Balance 1985-1986*, International Instit te for Strategic Studies, London, 1985, p. 23.

stationed in Czechoslovakia and Poland might also be assigned to the Warsaw Air-Defense Front.

Joint Baltic Fleet. The Joint Baltic Fleet, composed of the Soviet Baltic Fleet and the East German and Polish navies, exists in peacetime.[17] In wartime, a large percentage of the merchant ships belonging to the USSR, Poland, East Germany, and Czechoslovakia would be incorporated into the Joint Baltic Fleet.

North Sea Naval Squadron. This naval element consists of formations and units detached from the Soviet Northern Fleet and tasked to operate in the North Sea Zone of Naval Operations, the naval equivalent of a front.[18]

Strategic Rocket Troops. The USSR has six strategic rocket armies,[19] all based inside the Soviet Union and answering directly to the Supreme High Command through the commander in chief of Strategic Rocket Troops and the General Staff. Owing to the strategic importance of the Western TVD, one may assume that at least one army based in the western USSR and equipped with medium-range (SS-4) and intermediate-

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[17]The Polish and East German navies are particularly strong in amphibious warfare and would contribute substantially to Soviet amphibious operations in the Baltic. See *Soviet Military Power 1986*, p. 60.

[18]*The Military Balance 1985-1986*, p. 26, and *1986-1987*, p. 41, and *Soviet Military Power 1986*, p. 12, link the Arctic Ocean TVD with the Northwestern TVD and the Atlantic Ocean TVD with the Western TVD and place the Soviet Northern Fleet under the former pair. The Northern Fleet, however, is the only Soviet fleet operating in the Atlantic and therefore would not be subordinate to the Northwestern TVD--Arctic Ocean TVD. Moreover, the Atlantic Ocean is a theater of war, rather than a TVD, with extraordinary strategic importance. In a war, its tasks would include combating the huge NATO fleet, preventing North American reinforcements and supplies from reaching NATO forces in Europe, and (in a nuclear war) attacking the United States and Canada with ballistic missiles launched from the formidable Soviet fleet of nuclear-powered submarines. One must assume, therefore, that in wartime the Northern Fleet would be directly subordinated to the Stavka VGK through the commander in chief of the Soviet navy and that it would cover both the Atlantic and a substantial part of the Arctic Ocean. Neither the commander of the Western TVD nor the commander of the Northwestern TVD would have the time or opportunity to deal with the battle of the Atlantic (91 million square kilometers), not to mention the Arctic Ocean (20 million square kilometers).

[19]*The Military Balance 1985-1986*, p. 21.

range (SS-20) ballistic missiles and possibly variable-range SS-11 missiles and SS-19 intercontinental ballistic missiles (ICBMs) would be tasked to strike targets nominated by the high command of the Western TVD.

The General Staff would have to approve such targets, and operational control over the launch of nuclear strikes on these targets would remain in the hands of the highest political authorities, operating through the General Staff and the commander in chief of Strategic Rocket Troops. In the case of escalation from a conventional to a large-scale nuclear war, these missiles would be the main means of directly influencing military operations throughout the theater. Consequently, in a combined-arms nuclear campaign waged under the direction of the commander in chief of the Western TVD, their use would have to be closely coordinated with that of other nuclear and nonnuclear forces.

Air Armies of the Supreme High Command. The Soviet air forces are organized into five air armies directly subordinate to the Supreme High Command.[20] At the beginning of a a large-scale war in Central Europe, the Stavka VGK might assign the Legnica and Smolensk, and perhaps the Vinnitsa, air armies to the Western TVD commander in chief for several days to conduct sustained air operations.[21] The Stavka VGK, operating through the General Staff, would retain the right to reassign these aircraft to other tasks if this became necessary.

The Legnica and Vinnitsa air armies include fighter-bombers (primarily Su-24 *Fencers* and MiG-23 *Floggers*) and fighter interceptors. The Smolensk air army contains medium- and intermediate-range strategic bombers (*Backfires*, *Badgers*, and *Blinders*).[22]

[20] Ibid. See also Mark Urban, "Major Reorganization of Soviet Air Forces," *International Defense Review*, No. 6, 1983, and *Soviet Military Power 1986*, p. 76.

[21] See *Soviet Military Power 1986*, pp. 76. The TVD high command would have "under its control...strategic air-defense elements in the TVD and any strategic air army and airborne elements allocated by the VGK." Ibid., p. 59.

[22] According to *Soviet Military Power 1986*, p. 60, "Within the western TVD, deep-interdiction attacks against NATO airfields and other deep targets would be conducted by *Fencer* aircraft as well as almost 400 Strategic Aviation *Backfire B/C*, *Blinder*, and *Badger G* medium bombers stationed in the western Soviet Union. Force capabilities will continue to improve as additional *Backfires* replace older *Badgers*." See also Ibid., pp. 76-79.

Airborne Army. Airborne forces are also subordinated to the Supreme High Command.[23] Seven or eight Soviet airborne divisions,[24] the Polish 6th Airborne Brigade,[25] the Czechoslovak 22d Airborne Regiment, and the East German 1st Airborne Regiment exist in peacetime. They could form the basis for at least one airborne army, consisting of two to four airborne divisions and support units in wartime. The recently increasing strength and capabilities of Soviet military transport aviation might allow the simultaneous dropping of two airborne divisions.

Within the framework of the initial strategic operation in Europe, WP forces would probably conduct at least one independent strategic airborne operation involving the paradrop of one or two divisions of airborne troops to capture a major objective well over 100 kilometers behind the line of contact. For this operation, a temporary formation on the scale of an airborne army might be set up under the command of the Western TVD.

In addition to an airborne army, the high command of the Western TVD might also be assigned individual airborne divisions. Some of these might go to the various fronts and some might directly serve the commander in chief of the Western TVD.

Military Transport Aviation. A corps of Military Transport Aviation (VTA), subordinated directly to the Western TVD high command, would probably support the airborne army and separate airborne divisions. It would also be used for other airlift missions required by the Western TVD.[26] This corps would have one or two VTA divisions and a few independent VTA regiments.

[23]See FM 100-2-2 (1984), p. 2-4.

[24]Seven combat airborne divisions and the 44th airborne training division, stationed in the Baltic MD. See *Oesterreichische Militaerische Zeitschrift*, January-February 1985, pp. 152-156. See also *Soviet Military Power 1986*, p. 65.

[25]Reorganized from the 6th Airborne Division; see *Zolnierz Wolnosci*, February 17, 1987, p. 1; in wartime this unit would probably be raised to divisional status.

[26]See ibid., pp. 64, 76, 79, and 95-96.

Military Districts in Western USSR. Even in the event of mobilization for war, the Baltic, Belorussian, Carpathian, and Kiev military districts would probably continue to exist under the same names and with the same missions and territorial responsibilities that they have in peacetime. The major ground and air force units assigned to these MDs, including those in high states of readiness and those that would have to be filled out with mobilized personnel and put through combat training prior to commitment, would be integrated into follow-on armies and fronts that would move forward to join the battle according to existing war plans.

As combat-ready units departed, the military districts would remain the USSR's basic wartime territorial military structure, responsible primarily for forming additional units for the second strategic echelon. The prewar deputy military district commander for combat training and military educational institutions would, in most cases, become the new MD commander, replacing the one who had most likely moved westward as the commander of a follow-on front.[27] The new chief of staff of the MD would be the prewar deputy chief of staff for organization and mobilization affairs.

KGB Border Districts and MVD Divisions. The area of responsibility of the Western TVD contains the peacetime Baltic and the western border guard districts of the Committee of State Security (KGB). Only a relatively small portion of these KGB border guards (who would be reinforced by reservists) would remain inside the USSR to guard the borders. All others, together with some divisions of Ministry of Internal Affairs (MVD) internal security troops, would move forward to provide rear security for Soviet forces in Eastern Europe, to conduct countersabotage, and to assume occupation duties in captured areas of Western Europe.[28]

[27]Military districts in the central part of the USSR having relatively large numbers of higher military schools and training facilities often have separate deputy commanders for combat training and for military educational institutions; in the western MDs these posts are combined.

[28]See FM 100-2-2 (1984), p. 14-3.

Eastern European National High Commands. Under a wartime three-tiered (Stavka VGK--TVD--front) strategic command arrangement, these commands would be subordinated operationally to the commander in chief of the Western TVD. Under a four-tiered structure (Stavka VGK--theater of war--TVD--front), the Eastern European national high commands would come under the operational control of the commander in chief of the theater of war. Both arrangements would include the Eastern European national forces assigned to both the external front and the internal front.[29]

Rear Services. The Western TVD would not have its own theater-level logistic resources. Instead individual units would receive weapons, ammunition, spare parts, fuel, food, clothing, and other supplies from the central military supply organization (rear services) of the Ministry of Defense through the rear services of the fronts, armies, divisions, etc. Central rear services in Moscow would also directly supply the Western TVD's fronts and supervise their medical services and evacuation systems. The railroads transporting supplies and forces within the rear zones of the fronts would be under the direct control of the central military transportation directorate (VOSO).

The TVD high command would, however, include a chief of rear services and a relatively large rear services headquarters to plan, coordinate, and supervise the activities of subordinate front, army, and divisional rear services units. Thus, while the Soviet operational chain of command in a multitheater war would likely include four levels in Europe (Stavka VGK--high command of the European Theater of War--high commands of the TVDs--high commands of the fronts), on the strategic level the logistic supply of the rear would consist of only the central logistic network controlled from Moscow and the front logistic systems.[30]

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[29]For a detailed description of the Polish internal front forces, see Michael Sadykiewicz, *Wartime Missions of the Polish Internal Front*, N-2401-1-OSD, The RAND Corporation, Santa Monica, Calif., July 1986.

[30]The USSR minister of Defense exercises control of the rear services through the General Staff, the deputy minister of Defense for rear services, the service chiefs, and the chiefs of the main and central directorates of the Ministry of Defense USSR. See "Tyl vooruzhennykh sil," *VES*, p. 758. See also FM 100-2-2 (1984), pp. 13-1 to 13-14.

Effect of Scenario on Echelonment

Differing mobilization and reinforcement scenarios would, of course, produce different WP force deployments and thus different echelonment in the Western TVD. A short-warning scenario for a large-scale Warsaw Pact surprise offensive attack preceded by only a few days of covert preparations would find Soviet and Eastern European forces attacking and moving forward largely from peacetime locations. In such a scenario, highly ready divisions in the western MDs slated to join follow-on fronts in the first strategic echelon would move from peacetime garrisons in the USSR across Poland and eastern Czechoslovakia to forward assembly areas near the Polish-East German border and in central Czechoslovakia after hostilities had begun.

In contrast, if the war were preceded by ten days to two weeks of large-scale mobilization and reinforcement, perhaps disguised as major WP field exercises, Soviet, Polish, and Czechoslovak forces in Eastern Europe could move forward and the most ready Soviet divisions could move into forward assembly areas before the war began. In this scenario, the size and weight of the initial Warsaw Pact assault would be much greater than in the short-warning scenario. The follow-on elements of the first strategic echelon would be heavily concentrated in the GDR and western Czechoslovakia, thus compressing the distances between the first and second operational echelons of the first strategic echelon.

Table 3 compares the notional composition of the key strategic echelons in a Warsaw Pact short-warning surprise-attack scenario and an attack preceded by some ten days to two weeks of tension, mobilization, and reinforcement. The intermediate and deep strategic reserves remain the same in both scenarios.

NUMERICAL STRENGTH

Tables 4 and 5 show the peacetime numerical strength of the Western TVD.[31] Obviously, the strength would increase in wartime. Even the

[31]These tables are based on *The Military Balance 1984-1985*, the best available unclassified analysis at the time the research for this study was being conducted. The tables are intended to provide an unclassified basis for the ensuing discussion of operational concepts; they do not represent an intelligence estimate of the current Soviet-WP order of battle. The number of divisions, troops, and equipment in tables 4 and 5 approximate those in *Soviet Military Power 1986*, p. 12.

Table 3

WESTERN TVD STRATEGIC ECHELONMENT: SCENARIOS FOR ATTACKS WITH SHORT WARNING AND AFTER TEN DAYS OF MOBILIZATION

Short-Warning Attack Scenario	Ten-Day Mobilization Scenario
First Strategic Echelon	
Group of Soviet Forces in Germany Central Group of Forces Northern Group of Forces GDR forces Czechoslovak forces in western CSSR Polish divisions, including 5th, 10th, 20th tank; 4th, 12th motorized rifle; also 6th airborne and 7th amphibious assault brigades	Group of Soviet Forces in Germany Central Group of Forces Northern Group of Forces GDR forces CSSR forces Polish forces Units from Baltic, Belorussian, and Carpathian MDs
Second Strategic Echelon	
Most of Polish armed forces Czechoslovak forces in Slovakia (in first strategic echelon if Austria is attacked) Baltic MD Belorussian MD Carpathian MD Minsk air defense district Kiev air defense district	Baltic MD (except units assigned to first strategic echelon) Belorussian MD (except units sent to first strategic echelon) Carpathian MD (except units sent to first strategic echelon) Possibly units of Kiev MD Minsk air defense district Kiev air defense district
Intermediate Strategic Reserves (both scenarios)	
One strategic rocket army Smolensk, Legnica, and Vinnitsa air armies Airborne divisions One corps of military transport aviation Special reserves Possibly units of Kiev MD (except those sent to second echelon)	
Deep Strategic Reserves (both scenarios)	
Moscow MD, Ural MD, Volga MD VGK reserves not assigned to MDs	

NOTE: The echelonment of the Polish units is based on peacetime disposition, as shown in *Oesterreichische Militaerische Zeitschrift*, May 1985, p. 463. The Polish airborne and amphibious brigades were downgraded from divisions (see *Zolnierz Wolnosci*, February 17, 1987, pp. 1, 7), but would doubtless be raised to division status in wartime.

Table 4

ESTIMATED PEACETIME NUMERICAL STRENGTH OF WESTERN TVD:
AIR-LAND COMBAT FORMATIONS

		Army-Level Hq				Divisions				
	Front Hq	C-A* Army	Tank Army	Total	Air Army Hq	Tank	Motor Rifle	Air-borne	Total	Artillery Divs
Group of Soviet Forces, GDR	2	2	3	5	2	10	9	0	19	1
Northern Group of Forces	1	0	2	2	1	2	0	0	2	0
Central Group of Forces	1	1	1	2	1	2	3	0	5	0
Baltic MD	1	2	0	2	1	3	6	2	11	2
Belorussian MD	1	1	2	3	1	10	4	1	15	1
Carpathian MD	1	2	1	3	1	4	8	0	12	2
GDR forces	0	2	0	2	0	2	4	0	6	0
Polish forces	1	2	1	3	1	5	8	2	15	0
CSSR forces	1	0	2	2	1	5	5	0	10	1
Total	9	12	12	24	9	43	47	5	95	7

*Combined-arms.

NOTES: Strengths are given only for combat units, not for stocks. Strategic rocket troops, long-range aviation, and air-defense fronts are not shown. Wartime strengths would be much higher.

The Polish front-level hq does not formally exist in peacetime, but the main directorate of combat training (GZSB) serves this purpose.

Army-level hq (of both combined-arms armies and tank armies) include peacetime commands and those that could be organized within 24 hours on the basis of existing strength. Figures for Soviet air army hq do not reflect the reorganization of the late 1970s.

Division strengths appeared in *The Military Balance 1986-1987*, IISS, London, 1986, pp. 41-43. One of the two Polish airborne divisions is an amphibious assault division. *Soviet Military Power 1986*, U.S. Department of Defense, U.S. GPO, Washington, D.C., March 1986, p. 12, shows 94 divisions (excluding artillery) in the Western TVD.

In a war limited to Central Europe, the Kiev MD might be expected to contribute a front hq; 2 tank armies; an air army; 10 divisions, including 6 tank and 4 motorized rifle; and 1 artillery division.

Table 5

ESTIMATED PEACETIME NUMERICAL STRENGTH OF WESTERN TVD:
AIR-LAND COMBAT TROOPS AND EQUIPMENT

	Troops	Tanks	APCs	Guns 100 mm & over	Air-craft
Group of Soviet Forces, GDR	400,000	6,000	7,800	4,500	840
Northern Group of Forces	50,000	700	900	450	350
Central Group of Forces	110,000	1,500	2,000	1,200	110
Baltic MD	231,000	2,200	2,800	2,175	300
Belorussian MD	315,000	4,000	5,300	3,150	300
Carpathian MD	252,000	3,000	3,900	2,900	350
GDR forces	120,000	1,500	2,500	1,150	360
Polish forces	260,000	3,500	4,100	2,900	700
CSSR forces	200,000	3,500	3,700	2,375	470
Total	1,938,000	25,900	33,000	20,800	3780

NOTES: Troop strengths are based on an estimated "divisional slice" (i.e., TO&E of tank and motorized rifle divisions plus troops of all units above division) of 21,000 for the Soviets and 20,000 for other WP armies.

The number of Soviet tanks is based on an estimated 335 in tank divisions and 260 in motorized rifle (MR) divisions in the GSFG and 300 in tank divisions and 210 in MR divisions in western USSR MDs. The number of tanks in other WP forces is from *The Military Balance 1984-1985*. Tanks include main battle tanks with tubes 100-mm and over. *Soviet Military Power 1987*, p. 17, gives a total of 29,460 tanks.

Armored personnel carriers (APCs) include MICV (BMP, BTR, OT-65, and SKOT), but not BRDM and other armored scout cars. The number of Soviet APCs is based on a 1:3 ratio to tanks; figures for Eastern European APCs are from *The Military Balance 1984-1985*. *Soviet Military Power 1987*, p. 17, shows 32,200 APCs and infantry fighting vehicles.

The number of guns (100 mm and over) was calculated from the TO&E for Soviet ground forces: 180 in each tank division (including the new artillery battalion in each tank regiment and the new MR battalions that replaced the MR companies in each tank regiment; 200 (rounded upward from 195) in each MR division; and for both tank and MR divisions, 25% of the guns in artillery units above the divisional level. The numbers also include multiple rocket launchers. Eastern European figures were calculated similarly, based on figures in *The Military Balance 1984-1985*. *Soviet Military Power 1987*, p. 17, shows a total of 22,600 guns.

Aircraft include only tactical; WP forces would also have at least 1000 combat and assault helicopters in the forward area. All figures are from Donald R. Cotter et al., *The Nuclear 'Balance' in Europe: Status, Trends, Implications*, USSI Report 83-1, United States Strategic Institute, Washington, D.C., 1983, p. 37, Table A-2. *Soviet Miltary Power 1987*, p. 17, indicates 3600 tactical aircraft.

In a war limited to central Europe, the Kiev MD could contribute an additional 210,000 troops, 2800 tanks, 3600 APCs, 2350 guns, 100 aircraft.

peacetime figures, however, clearly reveal a heavy concentration of armored forces. In World War II, the presence of Soviet tank divisions usually indicated the direction of the offensive's main thrust. This indicator (although not the only one available) continues to be reliable.

Of the estimated 41 Soviet tank divisions stationed in Europe, some 37 (more than 90 percent) are assigned to the Western TVD. This concentration confirms the conclusion that the Soviets are applying the principles of mass and economy of force to preparations for the possibility of war in Europe and that their planning centers on the Western TVD. In a conventional war in Europe, tank forces would constitute approximately 50 percent of the attacking WP ground forces in the Western TVD. This would allow the Warsaw Pact organization to create assault forces in which three of four regiments were tank regiments. Other elements of WP air and ground forces are also being concentrated in the Western TVD.

The combat readiness of forces in the Western TVD is estimated in Table 6. Table 7 shows the relative force and materiel contributions of the USSR and the other Warsaw Pact countries to the Western TVD.

In addition to forces for a conventional war, the Western TVD also contains an enormous concentration of nuclear delivery systems. In the case of a single-theater war against NATO, 75 percent of the Soviet theater nuclear forces based west of the Urals could be used to support the Western TVD. The remaining 25 percent presumably would be used to support WP advances in other European strategic directions or would remain in reserve along with the theater nuclear forces based east of the Urals.

Should the USSR use 75 percent of its nuclear forces in a single-theater conflict, the approximately 7500 warheads might be allocated approximately as follows: 2200 at the tactical level; 2400 at the operational level; and 2900 at the theater strategic level.[32] This would give the Warsaw Pact forces a nuclear advantage of at least two to one over NATO in the Western TVD.

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[32]See Donald R. Cotter et al., *The Nuclear 'Balance' in Europe: Status, Trends, Implications*, USSI Report 83-1, United States Strategic Institute, Washington, D.C., 1983, p. 37.

Table 6

ESTIMATED COMBAT READINESS OF WESTERN TVD FORCES

	First Strategic Echelon			
	First Operational Echelon	Second Operational Echelon	Second Strategic Echelon	Intermediate Strategic Reserves
Missile forces[a]	100%	100%	100%	100%
Air forces[b]	100%	70%	70%	90%
Air defense forces	100%	80%	90%	80%
Ground forces[c]	100%	70%	70%	30%
Airborne forces	100%	80%	100%	60%
Sea-landing forces[d]	100%	80%	70%	--
Naval forces	75%	50%	40%	--

[a]Includes both the long-range missiles of the Strategic Rocket Troops based in the USSR and made available by the General Staff to strike targets nominated by the high command of the Western TVD and the operational and tactical missiles in the GDR, Poland, and Czechoslovakia, which the fronts and armies operating in the Western TVD would control directly.

[b]Includes all aviation--long-range, tactical, army, air defense, naval, and military transport--deployed in Western TVD.

[c]Taking first category divisions as the indicator.

[d]Includes only GDR marine units, Polish 7th amphibious division, and Soviet marine (*morskaya pekhota*) units; does not include degree of readiness of ships.

Table 7

SOVIET AND NSWP FORCE ALLOCATIONS TO WESTERN TVD

	Soviet	[Including Kiev MD]	NSWP	Soviet Percentage	
Front-level hq[a]	7	[8]	2	78%	[80%]
Combined-arms armies	8	[8]	4	67%	[67%]
Tank armies	9	[11]	3	75%	[79%]
Total	17	[19]	7	71%	[73%]
Air armies	7	[8]	2	78%	[80%]
Divisions					
Tank	31	[37]	12	72%	[76%]
Motorized rifle	30	[34]	17	64%	[67%]
Airborne	3	[3]	1	75%	[75%]
Artillery	6	[7]	1	86%	[87%]
Troops[b]	1,358,000	[1,568,000]	580,000	70%	[73%]
Tanks[b]	17,400	[20,200]	8,500	67%	[70%]
APCs[b]	22,700	[26,300]	10,300	69%	[72%]
Guns	14,475	[16,725]	6,425	70%	[72%]
Aircraft	2,250	[2,350]	1,530	60%	[61%]
Warships[c]	493	[493]	272	64%	[64%]

[a]Excluding air defense front headquarters.

[b]See Table 5.

[c]Includes all Soviet Baltic fleet and 20 percent of Northern fleet warships; adapted from *Military Balance 1984-1985*, IISS, London, 1984.

HIGH COMMAND

The high command of the Western TVD remains an enigma in the West, although the TVD has probably existed for 40 years.[33] Most analysts believe that Marshal of the Soviet Union Nikolay V. Ogarkov, formerly

[33]Most Western publications say that it was created in the early 1970s. I agree with Viktor Suvorov that "the GK of the western strategic direction of the Western TVD...was created in June 1946. It is located in Wuensdorf [GDR]." See Suvorov, "Strategic Command and Control: The Soviet Approach," *International Defense Review*, No. 12, 1984, p. 1818.

chief of the Soviet General Staff, has headed it since September 1984.[34] Other members of the Western TVD high command include Army General M. I. Sorokin, first deputy commander in chief; Colonel General M. N. Tereshchenko, first deputy commander in chief and chief of staff; and Colonel General B. P. Utkin (formerly deputy chief of the Main Political Administration), deputy commander for political affairs.[35]

The question remains as to whether Marshal Ogarkov's command responsibilities (or those of a possible successor) are limited to the Western TVD or whether they encompass the entire European Theater of War, including the Northwestern and Southwestern TVDs. In my judgment, Ogarkov's high command, although beneath Kulikov's high command in the military-strategic hierarchy, probably is prepared, depending on the circumstances, to fulfill both functions.[36] That is, he continues to command the Western TVD and would continue to do so in the event of a

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[34]In October 1984, G. V. Romanov, then a Politburo member, implied that Ogarkov held the post of commander in chief of the Western TVD when he reportedly said: "Marshal Ogarkov is in command of large Soviet forces in the West" (Reuters, October 14, 1984, cited in *Radio Liberty Daily Bulletin*, RL415/84, Munich, October 26, 1984, p. 3). The obituary of Marshal D. F. Ustinov (*Krasnaya zvezda*, December 22, 1984) seemed to substantiate Romanov's implication. Ogarkov was listed among the signers of the obituary just after the deputy defense ministers and ahead of the other probable theater commanders at that time (I. A. Gerasimov, Yu. P. Maksimov, and I. M. Tret'yak), implying that Ogarkov was first among the theater commanders. See also Ulrich-Joachim Schulz-Torge, "The Soviet Military High Command" (Part II), *Military Technology*, September 1985, p. 103. It was rumored in Moscow in July 1985, and widely accepted in the West, that Ogarkov had replaced Marshal Kulikov as first deputy minister of Defense and commander in chief of Warsaw Pact forces. Subsequent events indicated, however, that despite a brief disappearance from public view in July and August, Kulikov continues in the post of commander in chief of Warsaw Pact forces and that Ogarkov still commands the Western TVD.

[35]See Warner et al., 1987, p. 74.

[36]Soviet military history contains precedents for dual commands. From July to September 1941, Marshal S. K. Timoshenko simultaneously commanded the Western Strategic Direction (a precursor of the Western TVD) and the Western Front. See *Voyennyy entsiklopedicheskiy slovar'*, Voyenizdat, Moscow, 1983, pp. 195, 266; also see *Sovetskaya voyennaya entsiklopediya*, Voyenizdat, Moscow, Vol. 8, p. 43. Thereafter, Timoshenko served simultaneously as commander in chief of the Southwestern Strategic Direction and the Southwestern Front from September to December 1941. See *VES*, pp. 195, 838; see also *SVE*, Vol. 8, p. 43.

war limited, at least initially, to Europe. At the same time, he is probably slated to command the larger European Theater of War in a multitheater war.[37]

The Western TVD high command probably consists of a staff of around 1000: that is, it has at least as many generals and officers with various specializations as a strategic field headquarters. This number might well include an aviation commander, a naval specialist, an air-defense commander, a commander of rocket troops and artillery, and chiefs of engineering and chemical troops and their staffs, as well as representatives of subordinated and supporting forces and the staffs of these representatives. If the units and subunits subordinate to the high command headquarters--signal troops, engineering troops, traffic control, administration, military police, transport units, etc., as well as units assigned for its defense (antiaircraft, maneuver, and others)--were included, the total number of personnel directly associated with a TVD high command in wartime would reach 5000.[38]

In wartime, high-command personnel would generally be divided among the main, forward, and alternate command posts (CPs) of the theater high command.[39] In some cases, the high command might also create an auxiliary command post to direct the hostilities of a strategic direction that belongs to the TVD but is located away from the main strategic axis. One or two dummy command posts might also be established, but their personnel are not included in the above figures.

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[37]One cannot rule out the possibility, however, that the Warsaw Pact high command under Kulikov would become the headquarters for the European Theater of War (in the case of a global war), while Ogarkov's command would direct only the Western TVD. In either case, one must assume that either command would be prepared to serve both functions, should one of them be destroyed during the war.

[38]The main command post of a front would have approximately the same number of personnel.

[39]The purpose of having three different CPs is explained in Section V, below.

The TVD high command would not, however, engage in materiel supply. The central organs of rear services would supply the fronts directly. The absence of a rear services component, in fact, represents the major difference in composition between the staffs of the high command and the front.

The Soviets have made a significant investment in their TVD control structure. They have built several hundred hardened, bunkered command posts and communications centers, created an extensive peacetime communication system, and set up numerous, well-equipped mobile signal and headquarters support units. In wartime, they would field a survivable command system featuring numerous hardened, fixed, and mobile command posts; a dense communications network providing redundant channels between command posts; and extensive camouflage, concealment, and deception.[40]

In wartime, the headquarters of the Western TVD high command would probably be deployed in the massive underground bunkers that have been readied in peacetime. Such underground facilities are abundant and widely dispersed. The decision as to which of them to use in wartime would be made at the last minute before regrouping from peacetime to wartime headquarters.

In contrast to the headquarters of the fronts, armies, and divisions, whose CPs would often be relocated during hostilities, neither the main nor the alternate command post of the Western TVD high command would move during the initial period of the war. The theater commander in chief, accompanied by a small group of generals and officers, might occasionally visit subordinate front commanders, or he might deploy a temporary, mobile, forward (field) command post between the front CPs and the theater main command post. The visits of the TVD commander and his small staff would be made in aircraft and helicopters adapted for service as airborne command posts when the commander was aboard.

[40] *See Soviet Military Power 1986*, p. 60.

Part Two

MISSIONS: ASPECTS OF INITIAL STRATEGIC OFFENSIVE CONDUCTED WITH CONVENTIONAL WEAPONS

Part Two describes and illustrates the concepts of operations that the Soviets would probably apply during the first five days of a European theater conventional war. Such a campaign would involve rapid and sharp changes in the strategic situation and deep penetration of NATO's rear areas. Soviet forces would rely on mobility and maneuver and would wage an intense struggle to maintain the initiative.

Section IV discusses several distinctive force groupings that would take part in the fighting:

- Operational maneuver groups (OMGs)--high-speed exploitation forces that would seek to destroy enemy defenses after the lead echelons had broken through
- Air-land advance detachments that would operate well forward of the main force to carry out various combat missions in an offensive
- Tank fronts--heavily armored second-echelon fronts of the first strategic echelon that would maintain the momentum of the offensive to transform operational into strategic success.

The procedural and numerical norms and guidelines for the employment of conventional forces in a European conflict, elaborated in Sec. V, cover battlefield operations, marches, assembly and departure areas, railroad and trailer transport, and command posts. The norms are applied in Sec. VI in scenarios depicting the movements and activities of four representative divisions in the first strategic echelon. These include a motorized rifle division and three tank divisions, initially deployed at various distances from the main battle area. The motorized rifle division belongs to the initial assault echelon. The first tank division serves as an OMG; the second is a lead element of a second-echelon tank army; the third, initially deployed in the second strategic echelon, is part of a tank front.

IV. HIGH-SPEED EXPLOITATION FORCES

OPERATIONAL MANEUVER GROUPS

Since ancient times, warmakers have sought organic high-speed exploitation forces that could move at least twice as fast as the main forces. The high-speed element had to be capable of turning the enemy's flanks or breaking through and driving deep into the enemy's rear. Such capabilities have decisively influenced the outcome of battles, campaigns, and even wars.

Until World War II, ground forces consisted primarily of infantry units, and the cavalry served as the high-speed exploitation force. All levels of all armies contained cavalry units that could move twice as fast as the infantry. In World War II, the cavalry gave way to mechanized infantry and tank troops that could move at two to three times the speed of the cavalry. The Soviet high-speed exploitation units, known as *mobile groups*, included combined cavalry-mechanized units, mechanized and armored corps, and tank armies. They performed with great effectiveness during the latter stages of World War II.

Today, the ground force soldier moves into battle at the speed of the armored fighting vehicle in which he is riding. But, modern ground forces lack elements that can move at twice the speed of the mechanized and motorized units. Airborne parachute troops and helicopter-borne troops only partially serve this purpose.

To further complicate the situation, three new technologies--nuclear weapons, rocketry, and cybernetics--have appeared on the contemporary battlefield. The first provides unprecedented firepower; the second two add great range and accuracy of delivery.[1] These technologies have given rise to sharp contradictions in the art of war between fire and maneuver, that is, between the destructiveness and range of fire of nuclear means and the movement of mechanized and motorized infantry.

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[1]See William E. Odom (Lt. Gen., U.S. Army), "Soviet Force Posture: Dilemmas and Directions," *Problems of Communism*, July-August 1985, pp. 4-5. See also *Soviet Military Power 1987*, pp. 63-65.

The Soviet theater warfighting strategy for coping with the modern battlefield technologies focuses on striking deep into enemy territory. Such an operation would involve air, missile, and artillery strikes and special operations forces strikes to achieve nuclear and conventional fire superiority and to paralyze the enemy's command and control. To exploit the breakthrough into the enemy's rear, the Soviets have formed *operational maneuver groups*.[2] Thus, the OMGs apparently are designed to execute the same exploitation tasks as the mobile groups of World War II, in either a conventional or nuclear war.

If the OMGs are to be capable of advancing ahead of the main body of the attacking forces, which are also highly mobile, they must have

- More equipment and support than other armored exploitation forces, including tracked and cross-country vehicles; armored vehicles of all types; sapper, engineering, and river-crossing units; self-propelled artillery, multiple rocket launchers, and mobile air defense units;
- Substantial conventional fire support with organic and attached artillery and SSMs, as well as access to nuclear-weapon support in a nuclear conflict
- Strong air support
- Combat and transport helicopters
- Support of heliborne and airborne (parachute) assault landing (*desant*) forces
- Logistic autonomy.

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[2]According to *Soviet Military Power 1986*, pp. 65-66, "two corps-type structures have been formed. These units are divisions expanded to almost twice the size of a tank division. The new formations contain over 450 tanks, 600 infantry fighting vehicles and armored personnel carriers (APCs), and 300 artillery pieces and multiple rocket launchers." Soviet open literature does not mention operational maneuver groups; the term *operacyjna grupa manewrowa* has, however, appeared in Polish military writings; see, for example, Col. A. Musial, "Dzialanie bojowe lotnictwa na korzysc operacyjnych grup manewrowych" (Air Support of Operational Maneuver Groups), *Przeglad Wojsk Lotniczych i Wojsk OPK*, July-August 1982.

Both fronts and armies might create OMGs. The front-level OMGs would probably be army- or corps-size; the army-level OMGs, corps- or division-size. In a conventional war, the OMGs would operate differently from the World War II mobile groups. They would not, for example, assist the assault formations in breaking through the enemy's initial defenses, nor would they perform tasks already assigned to second-echelon formations.

The OMGs would be committed to battle only when and where enemy resistance had been substantially weakened. In these circumstances, OMGs would be able to advance rapidly into the enemy's rear, where they could maneuver broadly and rapidly to seize key terrain and choke points and possibly to assault command posts, airfields, and nuclear storage sites. In a European theater conventional war, OMGs might seek to shatter NATO's defenses and pave the way for the advance of other follow-on forces.

Western journalists and military analysts have devoted much attention to the emergence and development of operational maneuver groups.[3] These groups, however, represent only one type of specialized exploitation forces and are likely to operate only at the operational level. Other high-speed exploitation forces function at the tactical, operational, and strategic levels. Tank fronts will operate in this capacity at the strategic level, and air-land advance detachments, at the tactical level.

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[3]See, for example, the articles of Christopher Donnelly, including "The Soviet Operational Manoeuvre Group--A New Challenge for NATO," *International Defense Review*, No. 9, 1982; "Soviet Operational Concepts in the 1980s," in *Strengthening Conventional Deterrence in Europe. Proposals for the 1980s*, Macmillan, London, 1983; and "The Development of the Soviet Concept of Echeloning," *NATO Review*, December 1984. See also Lt. Col. John G. Hines and Phillip A. Petersen, "The Warsaw Pact Strategic Offensive: The OMG in Context," *International Defense Review*, No. 10, 1983; "The Conventional Offensive in Soviet Theater Strategy," *Orbis*, Fall 1983; and "The Soviet Conventional Offensive in Europe," *Military Review*, April 1984. Also, C. J. Dick, "Soviet Operational Manoeuvre Group--A Closer Look," *International Defense Review*, No. 6, 1983, and "Soviet Doctrine, Equipment Design and Organization: An Integrated Approach to War," *International Defense Review*, No. 12, 1983; Gen. Bernard W. Rogers, SACEUR, "Follow-On Forces Attack (FOFA): Myths and Realities," *NATO Review*, No. 6, December 1984; and *Soviet Military Power 1986*, pp. 71-72.

AIR-LAND ADVANCE DETACHMENTS

Organization and Functions

During World War II, Soviet ground forces successfully used five different highly mobile detachments that operated well ahead of the main body, performing various combat missions, especially in offensive operations. They included

- Forward detachments (*peredovyye otryady*)
- Raiding detachments (*reydovyye otryady*)
- Turning (or enveloping) detachments (*obkhodyashchiye otryady*)
- Reconnaissance detachments (*razvedyvatel'nyye otryady*)
- Diversionary detachments (*razvedyvatel'no-diversionnyye otryady--spetsnaz*).[4]

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[4]F. D. Sverdlov, *Peredovyye otryady v boyu*, Voyennoye Izdatel'stvo, Moscow, 1986, offers the most comprehensive description to date of these detachments. This section is based on Sverdlov and other Soviet, Polish, and Western sources, as follows.

"An Enveloping Detachment in Battle Formation," *Soviet Military Review,* May 1983, pp. 20-21. R. Baykeyev, "Peredovoy otryad forsiruyet reku," *Voyennyy vestnik,* December 1983, pp. 58-63. N. K. Glazunov and N. S. Nikitin, *Operatsiya i boy. Inostrannyye armii*, Voyenizdat, Moscow, 1983, pp. 52-68. N. Kireyev and N. Dobchenko, "Iz opyta boyevogo primeneniya peredovykh otryadov tankovykh (mekhanizirovannykh) korpusov," *Voyenno-istoricheskiy zhurnal,* September 1982, pp. 20-28. P. Konoplya, "V otryve ot glavnykh sil," *Voyennyy vestnik,* October 1982, pp. 46-49. Marshal of Tank Troops O. A. Losik, *Stroitel'stvo i boyevoye primeneniye sovetskikh tankovykh voysk v gody velikoy otechestvennoy voyny,* Voyenizdat, Moscow, 1979, pp. 137-148, 260-262.

Army Gen. A. I. Radziyevskiy, *Tankovyy udar,* Voyenizdat, Moscow, 1977, pp. 129-145. -----, *Armeyskiye operatsii,* Voyenizdat, Moscow, 1977, pp. 86-102. -----, *Taktika v boyevykh primerakh. Diviziya,* Voyenizdat, Moscow, 1976, pp. 94-95. Lt. Gen. V. G. Reznichenko, *Taktika,* Voyenizdat, Moscow, 1984, pp. 56-89. Yu. Rodnikovskiy, "Reyd parashutno-desantnogo batal'ona v tylu protivnika," *Voyennyy vestnik,* August 1978, pp. 53-55.

Sovetskaya voyennaya entsiklopediya. Vol. 1: "Armeyskaya nastupatel'naya operatsiya," pp. 239-244; "Aeromobil'naya operatsiya," pp. 342-343; "Aeromobil'nost'," ibid.; "Aeromobil'nyye voyska," ibid. Vol. 2: "Vozdushno-desantnaya operatsiya," pp. 284-285; "Voyska spetsial'nogo naznacheniya," pp. 326-327; "Vstrechnyy boy," pp. 407-408. Vol. 5: "Obkhod," p. 676; "Obkhodyashchiy otryad," ibid. Vol. 6: "Peredovoy otryad," p. 282; "Presledovaniye," p. 511. Vol. 7: "Razvedyvatel'naya gruppa," p. 35; "Razvedyvatel'nyy otryad," p. 39; "Razvedyvatel'nyy dozor," ibid.; "Reyd," p. 95; "Redovyye deystviya," ibid.; "Reyndzhery," ibid.

The detachments had no fixed structure, but were organized and configured to carry out specific missions. They operated in the enemy rear, in direct support of their parent units and formations. On the contemporary battlefield, the Soviets and their Warsaw Pact allies would almost certainly again rely on all five types of advance detachments.

Modern advance detachments would differ from those employed in World War II primarily in that they would operate in close coordination with various airborne or heliborne units. The airborne or heliborne unit might form an organic part of the advance detachment itself, or it might serve as a supporting (*podderzhivayushchiy*) or securing

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Voyennyy entsiklopedicheskiy slovar'. "Vozdushno-desantnaya operatsiya," p. 147; "Desant spetsial'nogo naznacheniya," p. 229; "Obkhod," p. 499; "Obkhodyashchiy otryad," ibid.; "Peredovoy otryad," p. 547; "Preodoleniye polosy obespecheniya," p. 585; "Presledovaniye," p. 585; Razvedyvatel'nyy otryad," p. 617; "Razvedyvatel'nyy dozor," ibid.; "Reyd," p. 630; "Reydovyye deystviya," ibid. Also, I. Vorob'yev, "Forward Detachments in Offensive Operations and Battles," *Voyennaya mysl'*, in *Selected Readings from "Military Thought," 1963-1973,* Vol. 5, Part 1, pp. 96-105.

Lt. Gen. B. Chocha, *Rozwazania o taktyke,* MON, Warsaw, 1982, pp. 133-140. J. Cwierdzinski, *Taktyka na wspolczesnym polu walki,* MON, Warsaw, 1970, p. 134. Cz. Daniel, "Dzialanie pododdzialow obejscia w terenie lesisto-jeziornym," *Przeglad Wojsk Ladowych,* February 1984, pp. 23-24. R. Konopka, "Wspoldzialanie rzutu ladowego oddzialu wydzielonego z rzutem powietrznym," ibid., June 1982, pp. 29-34. A. Konopnicki, "Dzialanie batalionu jako oddzialu wydzielonego," ibid., December 1984, pp. 5-13. W. Mikhalak, "Lotnictwo w dzialaniach rajdowo-manewrowych wojsk ladowych," *Przeglad Wojsk Lotniczych i Wojsk OPK*, February 1982, pp. 5-9. A. Musial, "Dzialanie bojowe lotnictwa na korzysc operacyjnych grup manewrowych," ibid., July-August 1982, pp. 9-14. T. Podkowa, "Ugrupowanie OW w skladzie ladowo-powietrznym," *Przeglad Wojsk Ladowych*, April 1983, pp. 49-52.

C. N. Donnelly, "Operations in the Enemy Rear. Soviet Doctrine and Tactics," *International Defense Review,* January 1980, pp. 35-41. J. D. Douglass, Jr., *The Soviet Theater Nuclear Offensive,* U.S. Government Printing Office, Washington, D.C., 1976. L. I. Dzirkals, *"Lightning War" in Manchuria: Soviet Military Analyses of the 1945 Far East Campaign,* P-5589, The RAND Corporation, Santa Monica, Calif., January 1976. Lt. Col. David M. Glantz, U.S. Army, "Soviet Operational Formation for Battle: A Perspective," *Military Review,* February 1983, pp. 2-12; Capt. Stephen Shervais, Jr., USAF, "'Forward Detachments' and the Soviet Nuclear Offensive," ibid., April 1979, pp. 66-71. G. Villahermosa, "Soviet Enveloping Detachments," *Armor*, September-October 1984, pp. 13-17. *Soviet Army Operations and Tactics,* FM 100-2-1 (TBP FY84), Coordinating Draft, August 1982, U.S. Government Printing Office, Washington, D.C., 1984, pp. 5-5 to 5-55.

(*obespechivayushchiy*) unit. An organic air element would be operationally subordinate to the detachment commander. An air support unit, while supporting an advance detachment, would be subordinate to the higher-level commander, as would be the securing air unit.

The air-land detachments of today would operate deeper in the enemy rear, advance more rapidly, undertake more complicated operations, and enjoy greater operational autonomy than did their World War II counterparts. Moreover, the modern detachments would have far superior air, artillery, and missile fire support.

Each of the five types of contemporary air-land advance detachments has its own specific mission. A forward detachment, for example, might be tasked to capture an objective and hold it for the arrival of the main body; a raiding detachment might be sent to destroy enemy forces and/or objectives but not to hold them. The specific mission determines the detachment's ad hoc strength, composition, and time, depth, and duration of commitment (see Table 8).

Forward Detachments

Missions. Forward detachments would be used to gain control of or destroy objectives that were difficult to reach or eliminate. They might be assigned one or more of the following tasks:

- Break through the covering force area
- Combat enemy reserves
- Pursue the enemy in the operational zone
- Strike the enemy's flanks and rear
- Seize heights and other important terrain, including river crossings, airfields, communication centers, and POL storage facilities
- Destroy missile sites, nuclear ammunition depots, and other important field installations
- Delay and combat enemy air-sea landings
- Detect, isolate, and annihilate enemy special reserves.

Table 8

COMPARISON OF FIVE TYPES OF NORMAL SOVIET AIR-LAND ADVANCE DETACHMENTS IN CONVENTIONAL OFFENSIVE

	Forward	Raiding	Turning	Reconnaissance	Diversionary
Organizing level	Army, div, regt	Army, div, regt	Div, regt, bn	Army, div, regt	TVD, front, army
Average strength	Battalion to regiment (reinforced)	Battalion to regiment (reinforced)	Company to battalion (reinforced)	Company to regiment (reinforced)	Spetsnaz section (a few men) to group (100-150)
Typical missions	Capture heights, passes, passages, other objectives in enemy rear; hold for main force	Destroy enemy forces, military objectives, CPs; disorganize enemy rear; spread panic	Strike enemy defense from unexpected direction, in mountains, forests, swamps, etc.	Reconnoiter enemy forces & terrain	Destroy military objectives, communications in enemy rear; spread panic; collect operational, strategic intelligence
Depth of action in enemy rear	15 to 70 km	20 to 60 km	5 to 30 km	15 to 90 km	50 to 400+ km
Duration of action	Few hours to 1 day	Few hours to 2 days	Few hours to 1 day	Unlimited	Unlimited
1st day of action	D-day	D+1 to D+2	D-day	D-day	Night before D-day
Operational mode of main body	Ground	Ground	Ground	Ground and air	Air and sea
Have weapons, tanks, APCs, etc.	Yes	Yes	No	Yes	No
Heliborne landing	Usually	Not usually	In strike phase	Not usually	Usually parachute
Helicopter fire support	Usually	Usually	In strike phase	Not usually	No
Ground attack fighter support	Usually	Usually	In strike phase	Not usually	No
Main body arty fire support	Always	Frequently	Rarely	No	No
Must reunite with main body	Yes	No	Yes	No	No

Forward detachments could accomplish these missions more easily and effectively than regular first-echelon units and subunits, long-range firepower, or air-delivered desant forces. Moreover, if the main force were delayed, the forward detachment would already have reached the battle area and could operate independently. Table 9 shows the composition and strength of forward detachments.

If a nuclear offensive were expected, forward detachments would be organized before the outbreak of war, by D-1 at the latest. In anticipation of a conventional offensive, they would be formed during the preparation for and course of combat operations. Their personnel and equipment would be drawn from among the first-echelon units and subunits that had the greatest facility for breaking away from the main forces and rapidly penetrating deep into the enemy defense.

The forward detachments would go in after the main force had broken through enemy battalion, brigade and, particularly, division reserve positions. The breakthrough would create favorable conditions for rapid maneuver operations, especially for airborne and heliborne drops in the enemy rear.

The forward detachment of an army in the first operational echelon would most likely be set up before the offensive began. The divisional forward detachment would be created during the battle against the NATO covering force, usually before the division achieved its immediate objective. The regimental forward detachments, in most cases, would be organized only after the regiment had moved into the enemy rear, that is, when it had secured its immediate objective.

Threat to NATO. In a conventional war fought only in the Central Region--Western TVD, the Warsaw Pact nations would probably enjoy an average numerical superiority of 3 or 4 to 1 (5 or 6 to 1 on the main axes) over NATO. A single NATO corps, defending a sector approximately 100 to 120 kilometers wide, would face a WP first-echelon front formation consisting of the first operational echelons of a combined-arms army and a tank army. The first operational echelons of the two armies would contain six or seven divisions; the divisions' first (tactical) echelon would consist of approximately 20 maneuver regiments.

Table 9

COMPOSITION AND STRENGTH OF NORMAL SOVIET AIR-LAND FORWARD DETACHMENTS IN CONVENTIONAL OFFENSIVE

	Detachment of Motorized Rifle Regiment	Detachment of Motorized Rifle Division	Detachment of Tank Division	Detachment of Airborne Division	Detachment of Combined-Arms Tank Army
Main body	a. 2 MR companies b. 1 MR battalion	a. 1 MR battalion b. 1 MR regt	a. 1 tank bn b. 1 tank regt	a. 1 parachute bn b. 1 para regt	a. 1 MR regt b. 1 tank regt
Reinforcement MR infantry	--	--	a. 1 MR company b. 1 organic MR bn	--	--
Tanks	a. 1 tank company b. 1 tank company	a. 1 tank company b. Organic	--	--	a. Organic b. Organic
Artillery	a. 1 SP 122-mm gun battery; 1 120-mm mortar plat b. 1 SP 122-mm gun battalion	a. 1 SP 122-mm gun battery b. 1 SP 152-mm gun battalion; 1 MRL battery	a. 1 SP 122-mm gun battalion b. 1 SP 152-mm gun battalion; 1 MRL battery	a. 1 SP 85-mm gun btry and/or 1 122-mm towed gun bn b. 1 SP 85-mm gun btry; 1-2 120-mm mortar or 122-mm gun bns	a. 1 SP 152-mm gun battalion; 1 MRL bn b. Same as above
Antitank	a. 1 battery b. 1-2 batteries	a. 1-2 batteries b. 1-2 batteries	--	a. 1 battery b. 1-2 batteries	a. 1 battalion b. --
Antiaircraft	a. 1 platoon b. 1 battery	a. 1 battery b. 1-2 batteries	a. 1 battery b. 1-2 batteries	a. 1-2 batteries b. 1-2 batteries	a. 1 battalion b. 1 battalion
Engineer	a. 1 sec; 1 plat b. 1 platoon	a. 1-2 platoons b. 1-2 companies	a. 1 platoon b. 1-2 companies	a. 1 platoon b. 1 company	a. 1-2 companies b. 1-2 companies
Chemical	a. 1 section b. 1 sec; 1 plat	a. 1-2 sections b. Organic	a. 1-2 sections b. Organic	a. 1-2 sections b. Organic	a. Organic b. Organic
Heliborne landing	a. 1 platoon b. 1 plat; 1 co	a. 1 plat; 1 co b. 1 co; 1 bn	a. 1 plat; 1 co b. 1 co; 1 bn	--	a. 1 co; 1 bn b. 1 co; 1 regt
Support Assault helicopter	a. 1 flight b. 1 company	a. 1 company b. 1 battalion	a. 1 company b. 1 battalion	--	a. 1 battalion b. 1 regiment
Long-range artillery	a. & b. Up to 1 battalion	a. & b. Up to 1 brigade	a. & b. Up to 1 brigade	a. & b. Up to 1 brigade	a. & b. Up to 2 brigades
Ground attack fighter	a. & b. Up to 2 flights	a. & b. Up to 1 squadron	a. & b. Up to 1 squadron	a. & b. Up to 1 regiment	a. & b. Up to 1 division
Securing Air-defense arty & SA missiles	a. & b. Up to 1 battalion	a. & b. Up to 1 regiment	a. & b. Up to 1 regiment	--	a. & b. Up to 1 brigade
Interceptor aircraft	--	a. & b. Up to 1 squadron	a. & b. Up to 1 regiment	a. & b. Up to 1 division	a. & b. Up to 1 division

NOTES: In the "main body" line, "a." represents the minimum strength and "b." the maximum strength. In succeeding lines, "a." refers to the minimum-strength main body and "b." to the maximum-strength main body.

These figures suggest that 22 to 25 forward detachments might be formed in each NATO corps sector: The two armies might create a total of 2; the divisions, 6 or 7; and the regiments, 14 to 16, although not every regiment would have the conditions for creating a forward detachment. Of course, the forward detachments would not all be committed to battle simultaneously (if they were, they would average one forward detachment for each 4 or 5 kilometers of the NATO corps defense sector). Rather, they would be echeloned with regard to (1) the time of commitment to action and (2) the depth of the overall combat (operational) formation.

The Warsaw Pact's ability to reach well forward into a NATO corps sector derives also from the following other assets:

- The remaining four air-land advance detachments (raiding, turning, reconnaissance, and diversionary)
- Heliborne desant battalions and brigades from the army and front levels
- Amphibious desants to land on the coastal flank
- Airborne (parachute) desants, especially for landings in the operational zone behind the main battle area.

Hines and Petersen estimate that the Warsaw Pact's "forward reach," including OMGs, would amount to as much as 30 percent of its overall strength.[5]

Airborne Element. A heliborne desant landing party would probably consist of motorized rifle subunits drawn from the main body of the forward detachment, especially if the detachment were created from a motorized rifle battalion. If so, one of its motorized rifle companies, without heavy weapons, would serve as the desant force.[6]

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[5] *Military Review*, April 1984, p. 8.

[6] In certain cases, a forward detachment would not have an air element; it might even lack support from helicopters and/or ground attack fighters, but this would be the exception rather than the rule.

Transport helicopters for the desant party would be temporarily attached to the forward detachment from a division, an army, or sometimes even a front, as would the escort attack helicopters (Mi-24 *Hinds* and Mi-28 *Havocs*) participating in the mission. The heliborne assault party could also use the helicopters for fire support. The front would send ground attack fighters as temporary supporting elements. Interceptor subunits would combat enemy aircraft in the air corridors leading to the desant drop zones. In addition, long-range artillery and dual-capability surface-to-surface missile units employing conventional munitions would support the heliborne and ground-based forward detachments.

Owing to the importance of air-land forward detachment operations, their fire support would be planned two command levels higher. That is, the army level would supervise air fire missions on behalf of regimental forward detachments, and the front level would plan air fire support for divisional and army forward detachments.

TANK FRONTS: NEW STRATEGIC DIMENSION

In the Warsaw Pact's offensive strategy for war in Central Europe, follow-on forces, especially operational maneuver groups, would serve the important purpose of facilitating the rapid conversion of *tactical* into *operational* combat success. However, neither army-level nor front-level OMGs have the capability to transform *operational* into *strategic* success. Nor could the armies that would follow on as the second operational echelon of a first-echelon front accomplish this goal.[7]

The first-echelon fronts could not by themselves be expected to achieve the Soviet strategic goals of a first offensive because of the heavy losses that modern antiarmor weapons would doubtless inflict. The Arab-Israeli wars of the past 20 years attest to the high losses, especially of tanks and other armored vehicles, that characterize modern warfare, even if fought with conventional weapons. One may assume that in the case of a WP first strategic offensive, NATO advanced antitank weapons would have the advantage over WP first-echelon front armor.

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[7]Figures 5 and 6, Sec. II, above, describe Soviet strategic echelonment in the European theater.

The Soviets, therefore, would have to commit their second-echelon fronts to battle in order to maintain the momentum of an offensive, to accelerate its advance rate, to seize subsequent objectives, and to transform operational into strategic success. Table 10 indicates the stages at which the Soviets might commit various formations in a conventional offensive in Central Europe. Table 11 shows the strategic deployment for such an offensive.

As indicated in Table 11, each second-echelon front might include the following formations:[8]

- Up to three tank armies
- One or two combined-arms armies
- One tactical (front) air army
- One to three heliborne desant brigades (*desantno-shturmovyye brigady*--DShB)
- Combat and support formations and units, including rocket, artillery, air defense, and engineering.

Each second-echelon front, then, would contain 16 to 18 maneuver divisions, including up to 10 tank divisions. Ten tank divisions would comprise a total of 120 tank battalions and 60 motorized rifle battalions; six motorized rifle divisions would have 42 tank battalions and 60 MR battalions. The 16 to 18 divisions together would possess the following weaponry:

- 4000 to 5000 main battle tanks
- 6000 to 7000 armored personnel carriers (including armored fighting vehicles)
- 3000 to 4000 artillery and rocket tubes above 100-mm caliber.

Because tank divisions, tank regiments, and tank battalions form the backbone of the second-echelon fronts, they are often called *tank fronts*. The Western TVD might field two such tank fronts--that is,

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[8]The strength figures in this section are based on *The Military Balance 1984-1985*, pp. 14-27. Also see Tables 4 and 5 and Fig. 8, above.

Table 10

NOTIONAL PLAN FOR WP FIRST STRATEGIC OFFENSIVE IN CENTRAL EUROPE USING CONVENTIONAL WEAPONS

Goal of Offensive	Depth of Penetration	Sequence of Commiting Formations of First Strategic Echelon
First Stage: D-Day to D+2--D+3		
Tactical: Break through NATO forward defenses	50-100 km (including covering force area)	1st operational echelon (leading armies) of 1st-echelon fronts: - 1st-echelon divisions - OMGs of 1st-echelon armies - 2d-echelon divisions of 1st-echelon armies (not usually committed)
Second Stage: D+3--D+4 to D+8--D+12		
Operational: Seize NATO corps areas; destroy approaching reserves above corps level	100-300 km	2d operational echelon (follow-on armies) of 1st-echelon fronts: - OMGs of 2d-echelon armies - 2d-echelon divisions; reserves of 1st-echelon armies not committed in first stage - OMGs of fronts - 2d echelons and reserves of fronts
Third Stage: D+7--D+10 to D+13--D+16		
Strategic: Seize all NATO communications; destroy NATO theater reserve	200-400+ km	2d-echelon fronts - Leading armies - OMGs of 2d-echelon armies - 2d-echelon (follow-on) armies

NOTE: In another variant, the second-echelon fronts, or part of them, might be committed to complete the breakthrough of the NATO operational defense zone (*dlya zavershenlya proryva operativnoy zony oborony NATO*). In this case, formations of the second-echelon fronts would be committed at the end of the second stage, between D+6 and D+8.

Table 11

NOTIONAL DEPLOYMENT FOR WP FIRST STRATEGIC OFFENSIVE IN CENTRAL EUROPE USING CONVENTIONAL WEAPONS

	1st Strategic Echelon		2d Strategic Echelon	
	1st Echelon Fronts	2d Echelon Fronts	3d Echelon Front	Theater (Intermediate) Reserve
Fronts	4	2	1	--
Armies				
Tank	6	6	1	--
Combined-arms	7	2	2	--
Air	4	2	1	2
Airborne	--	--	1	--
Strategic rocket	--	--	--	1
Divisions				
Tank	25	20	3	1
Motorized rifle	27	12	10	2
Airborne	1	--	3	1
Amphibious	1	--	--	--

NOTES: The table is based on tables 4 and 5 and Fig. 8, above. It includes active peacetime armies and divisions; it does not include reserve divisions, artillery divisions, and air-defense fronts. The airborne army of the third-echelon front would be formed on D-1; the airborne division of the theater reserve would be the Soviet 44th Guards airborne training division in Ionava, Baltic MD (see *Oesterreichische Militaerische Zeitschrift*, February 1985, p. 80).

twice the number of units and equipment described above. One front would come from the Belorussian MD, and a second might be drawn from the Kiev MD. These two military districts contain the largest numbers of armored forces.

Tank fronts would pose a formidable threat to NATO defenses in Europe. They would fulfill the same role as the tank armies of World War II, but would operate at the strategic, rather than the operational, level. The Soviets might commit two tank fronts simultaneously on parallel axes, heavily supported by theater and VGK assets. This ponderous armada of 8,000 to 10,000 tanks obviously could gain far more ground against NATO defenses than could one or two army-level or front-level OMGs employing 350 to 700 tanks.

In sum, Soviet strategic planners probably would assume that the WP first-echelon fronts would suffer extensive materiel losses in a first strategic offensive in Central Europe. They might therefore reason that, unlike in World War II, when a single front often conducted two consecutive offensive operations, a contemporary first-echelon front operating in Central Europe would have the capability to execute only a single offensive operation.

An offensive operation undertaken by a single front could not exceed 250 kilometers in depth; it probably could not average more than 200 kilometers. The operation could continue no more than 12 days, after which most maneuver divisions would no longer be fit for battle. Therefore, only the commitment of one or two tank fronts in the third stage of a WP strategic offensive could ensure continued momentum, turn operational into strategic success, and thereby achieve the initial goals of a war in Europe.

V. NUMERICAL NORMS AND PROCEDURES

In a large-scale conventional offensive against NATO in Central Europe, the Soviets would probably follow the basic procedural and numerical norms described in this section. Procedural (or operational) norms suggest how the Soviets are likely to conduct a conventional campaign with regard to the sequence, timing, depth, location, and movement of the various elements. Numerical norms define the distances, frontages, advance rates, time, strength, etc. involved in such a campaign.

Soviet and Eastern European open sources rarely discuss numerical norms. The norms specified here represent my own estimates, unless otherwise noted.[1] They differ in many respects from the ones the Soviets used in World War II and those described in Western literature.[2] Because the Soviets and their Warsaw Pact allies use these norms only as rough guidelines and apply them flexibly, the data for similar elements in various tables and figures may vary, as they did in World War II (see Appendix A).

BATTLEFIELD OPERATIONS

The Soviets would expect a front on the main axis to achieve its immediate objective (*blizhayshaya zadacha*) within the first six days of the war. The front would secure its subsequent objective (*dal'neyshaya zadacha*) by penetrating 200 to 300 kilometers into enemy territory

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[1]These estimates are based on my knowledge of current military-scientific developments in the framework of the conventional and nuclear warfare doctrine recently adopted by the USSR armed forces.

[2]See John Erickson, Lynn Hansen, and William Schneider, *Soviet Ground Forces. An Operational Assessment*, Westview Press, Boulder, Colo., 1986, pp. 141-176, published after the present study was completed. See also U.S. Army Training and Doctrine Command, *Soviet Army Operations and Tactics*, FM 100-2-1 (TBP FY84), Coordinating Draft, August 1982, U.S. Government Printing Office, Washington, D.C., 1984.

within the next six days. Regimental and divisional objectives would be given in hours; a division's subsequent objectives would be assigned on a 24-hour basis.[3]

Table 12 suggests likely numerical and procedural norms for a front main-axis offensive in the first five days of a NATO-WP war, based on the following Soviet calculations of the depth of NATO defenses: covering force area--15 to 70 kilometers; main battle area--10 to 30 kilometers; division rear area--20 to 60 kilometers; corps defense area--90 to 120+ kilometers; army group defense area--up to 300+ kilometers.[4]

Table 13 shows the possible scope of WP formation frontages and objectives in the initial phase of such a war. Frontages are given for both the zone of offensive (*polosa nastupleniya*) and breakthrough sector (*uchastok proryva*) in both a short-warning attack and an attack after ten days to two weeks of mobilization. The relatively large differences in frontages and objectives in Table 13 stem from the discrepancies in the way the Soviets perceive the defensive capabilities of various NATO units. In their view, a U.S. division could defend a sector 30 to 60 kilometers wide and 20 to 50 kilometers deep; a West German division, 40 to 60 kilometers wide and 20 to 40 kilometers deep; and a West German corps, 80 to 120 kilometers wide and up to 140 kilometers deep.[5]

The advance rate of a Soviet offensive in the initial phase of a major conventional conflict in Europe would be the key factor in strategic operational planning.[6] The experience of World War II and subsequent local wars suggests that without air supremacy, the ground

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[3]See "Boyevaya zadacha," *VES*, p. 85.

[4]See N. K. Glazunov and N. S. Nikitin, *Operatsiya i boy. Inostrannyye armii* (Operations and Battle. Foreign Armies), Voyenizdat, Moscow, 1983.

[5]S. V. Grishin and N. N. Tsapenko, *Soyedineniya i chasti v boyu* (Formations and Units in Battle), Voyenizdat, Moscow, 1985.

[6]Experts on both sides predict a relatively slow WP breakthrough rate across the NATO main battle area. At the same time, some estimate that the advance rate would ultimately increase to 80 to 100 kilometers per day. Lt. Gen. B. Chocha, formerly chief of the Polish general staff, for example, assumed a 100 kilometers per day rate of advance. See *Rozwazania o taktyce* (Consideration of Tactics), MON, Warsaw, 1982, p. 143. These estimates seem exaggerated.

Table 12

NOTIONAL NORMS FOR FRONT MAIN-AXIS OFFENSIVE IN FIRST FIVE DAYS OF NATO-WP CONVENTIONAL WAR

D-Day: NATO Covering Force Area (25 km)

Seize:	Covering force area (CFA)
Commit:	Regiment forward detachments
	Tactical heliborne, amphibious (coastal area) desants in CFA
	Spetsnaz desants to 400 km (also commit on subsequent days)

D+1: NATO Division Main Battle Area (15 km)

Seize:	Most objectives in main battle area
Execute:	First-echelon regiments' immediate and subsequent objectives
	First-echelon divisions' immediate objectives
Commit:	Regiment and division second echelons
	Regiment and division forward detachments
	Tactical heliborne and amphibious desants up to 30 km
	Army OMG (in second half of day)

D+2: NATO Division Rear Area (20 km)

Seize:	Enemy divisional rear
Execute:	Divisions' subsequent objectives
	Army's immediate objectives
Commit:	Army OMG (if not committed D+1)
	Army second echelon
	Regiment, division, and army forward detachments
	Tactical heliborne and amphibious desants up to 40 km
	Operational heliborne and amphibious desants up to 50 km

D+3: NATO Corps Forward Defenses (35 km)

Seize:	Enemy corps forward defenses
Execute:	Army's subsequent objectives
Commit:	Front OMG
	Army second echelon (if not committed D+2)
	Tactical heliborne and amphibious desants up to 50 km
	Operational heliborne and amphibious desants up to 70 km
	Operational airborne (paratroop) desants up to 100 km

D+4: NATO Corps Rear Area (60 km)

Seize:	Entire enemy corps rear area
Execute:	Front immediate objectives
Commit:	Front second echelon
	Tactical heliborne and amphibious desants up to 50 km
	Operational airborne, heliborne, amphibious desants to 150 km

Table 13

NOTIONAL WP FORMATION FRONTAGES AND OBJECTIVES IN INITIAL PHASE OF CONVENTIONAL OFFENSIVE

Frontages (km)

	Short-Warning Attack		Ten-Day Mobilization	
	Zone of Offensive	Breakthrough Sector	Zone of Offensive	Breakthrough Sector
Division	20-40	5-10	15-30	3-6
Army	80-200	20-30	50-150	10-20
Front	200-500	40-70	150-400	30-50

Objectives

			Hours or Days From Beginning of	
		Depth (km)	Breakthrough of MBA	War
Immediate objective				
Regiment	Rout enemy battalion rear	3-5	H+4--H+7	
Division	Rout enemy brigade rear	10-15	H+10--H+14	
Army	Rout enemy division rear	20-50	D+1--D+2	D+2--D+4
Front	Rout enemy corps rear	100-150	D+3--D+4	D+5--D+6
Subsequent objective				
Regiment	Reach enemy div artillery positions; secure commitment of div 2d echelon	6-10	H+8--H+12	
Division	Destroy enemy div reserves; secure commitment of army OMG	20-30	H+16--H+24	
Army	Destroy enemy corps reserves; secure commitment of front OMG	80-120	D+2--D+3	D+3--D+5
Front	Destroy approaching reserves of echelon above corps; capture area that ensures front objective	200-300+	D+6--D+10	D+8--D+12

offensive can be neither rapid nor deep.[7] If the WP forces failed to destroy NATO air power early in a NATO-WP war, they would be unlikely to achieve air superiority.

Assuming that (1) hostilities began on the seventh day after NATO mobilization (M+7), (2) the fighting was limited to conventional weapons, (3) the WP advantage on the main axis was 6-8 to 1, and (4) the WP forces did not achieve air supremacy, WP forces could be expected to advance across NATO defense elements during the first five days of hostilities at the rates shown in Table 14. Table 15 gives typical norms for the commitment of follow-on forces. Figure 9 indicates the depths of and distances between combat formations.

MARCHES

March Formations

To sustain the momentum of an attack against NATO, the Warsaw Pact would have to provide a steady flow of follow-on forces from the rear to the front. Such movement involves marches. Depending on the distance to the main battle area, forces may have to execute up to four types of march--initial, long-distance, tactical, and prebattle--to get from their alert areas to the battlefront.

Initial march. Marches differ with regard to composition, grouping, formation, number of routes, degree of dispersion, and rates of advance. In the initial, or departure, march (*iskhodnyy marsh*), military units heading for the front proceed from regimental and independent battalion alert assembly areas to the divisional departure area or from alert assembly points to the alert assembly area.[8]

Long-distance march. The long-distance march (*marsh vne ugrozy stolknoveniya s protivnikom*--march without threat of meeting the enemy) advances forces through their own territory, where they do not expect

[7]All successful Soviet strategic and strategic-operational offensives on the European front in World War II were achieved with air supremacy. The same was true of Middle East wars in which the Soviets were involved; without air supremacy, their clients advanced much more slowly.

[8]Assembly and departure areas are discussed in the subsection immediately below.

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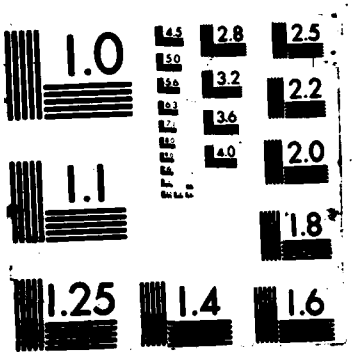
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2.2
3.6
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2.0
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1.25
1.4
1.6

Table 14

NOTIONAL WP ADVANCE RATES ON MAIN AXIS DURING FIRST FIVE DAYS OF CONVENTIONAL WAR

NATO Defenses Crossed	Day	km/Day	Average km/Day	Total km
Covering force area	D-day	20-30	25	25
Tactical defense zone				
Main battle area	D+1	10-20	15	40
Divisional rear area	D+2	15-25	20	60
Corps rear area	D+3	30-40	35	95
Army group rear area	D+4	50-70+	60	155
5-day advance rate			31	

NOTE: These advance rates differ from those given in Eastern European and Soviet sources. For example, Lt Gen B. Chocha, *Rozwazania o sztuce operacyjne*, MON, Warsaw, 1984, p. 104, estimates a 100-kilometer average daily advance rate in an offensive; Lt Gen V. G. Reznichenko, *Taktika*, Voyenizdat, Moscow, 1984, p. 130, suggests a rate of 100 to 150 kilometers. Both norms appear unrealistic for a nonnuclear offensive.

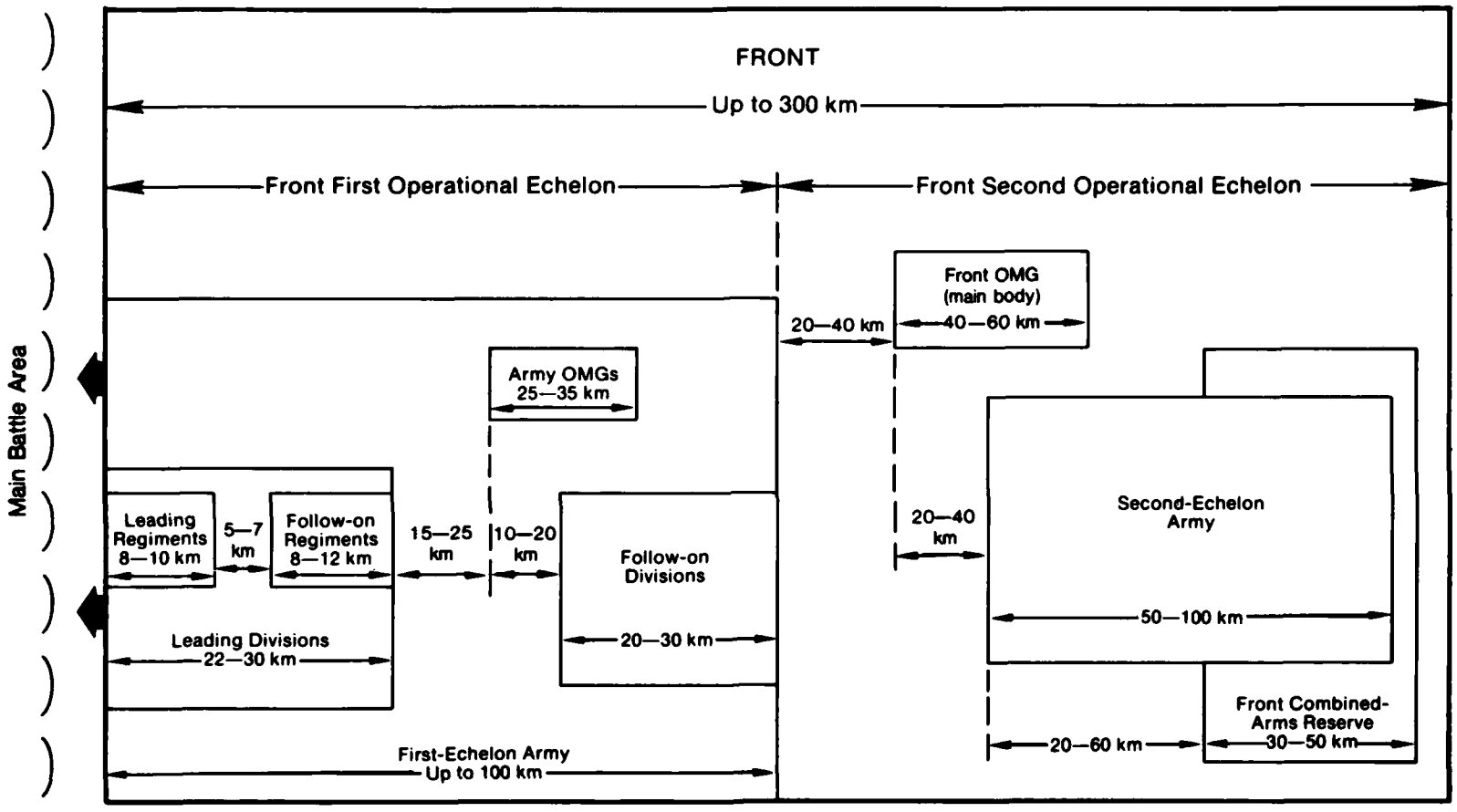
Table 15

TYPICAL NORMS FOR COMMITMENT OF WP FOLLOW-ON FORCES ON MAIN AXIS IN CONVENTIONAL OFFENSIVE

Combat or Operational Formation	Depth of Line[a] (km)	Time[b] of Commitment
Regiment 2d echelon	2-4	H+2--H+6
Division 2d echelon	6-10	H+8--H+12
Army OMG		
Assist 1st-echelon division to break through enemy forward defense	6-12	H+10--H+12
Exploit tactical success deep in enemy defense	15-35	p.m. D+1--D+2
Army 2d echelon	30-60	p.m. D+2--D+3
Front OMG	40-80	D+3--D+4
Front 2d echelon	100-150	D+4--D+5

[a]From initial forward edge of main battle area.

[b]D-day, H-hour--attack on covering force area; D+1--attack on first defense line of main battle area.



NOTES: Operational depths and distances would change in subsequent phases of the offensive.
Not to scale.

Fig. 9—Estimated depths and distances between combat formations at beginning of attack on main battle area

armed encounters with enemy ground forces. The main objective of this march is to move troops and equipment toward the front as rapidly as possible; all other functions are subordinated to this task. Mobile air defense units are the only support means deployed as operational elements during the long-distance march.

In a long-distance march, the forces may be divided into as many as six columns of vehicles with roughly comparable march speeds, for example, a column of tracked vehicles (BMP armored personnel carriers and tanks), a column of wheeled vehicles, and a column of trailers (see Table 16). The wheeled vehicles may, in turn, be subdivided into fast- and slow-moving (heavy-load) vehicles, or multi-wheel drive and rear-wheel drive. The Soviets often use trailers and tank transporters to carry heavy tracked vehicles; these would form a separate column.

Tactical march. Forces in tactical march (*marsh v pokhodnykh poryadkakh*--march in march formations) are poised to confront enemy ground forces at any moment. They are prepared to move directly into prebattle march formations and subsequently into attack formations. All types of march support--reconnaissance, advance security, flank security, and rear security--are fully employed during the tactical march. Proper distances are maintained between individual vehicles, between groups of vehicles, between subunits, between column members, and between the columns themselves.

Prebattle march. March in prebattle formations (*marsh v predboyevykh poryadkakh*) facilitates the rapid combat deployment of both forward and rear forces. It also enables the rapid deployment of forces for repelling enemy counterattacks from the flanks. Especially important at this stage is the speed with which the artillery and rocket troops can go into action.

Each column, and each major element in a column, remains operationally independent during march in prebattle formations, with its own air defense, antiarmor means, and sapper subunit. Reconnaissance units go two or three times farther ahead than they go in tactical marches. Units try to maintain prebattle march for as long as possible, as the deployment into attack formations substantially reduces the rate of advance.

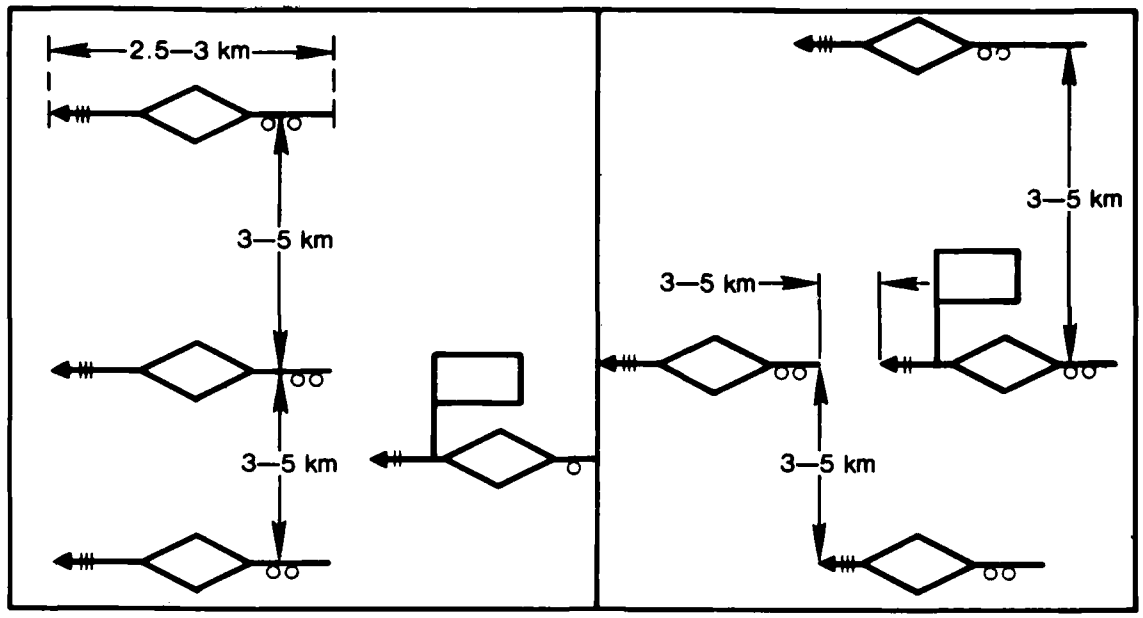
Table 16

PRINCIPAL PARAMETERS OF SOVIET ARMY MARCH FORMATIONS

March Formation	No. of Columns (Routes) per Div	Distance From MBA (km)	Average Advance per Day (km)	Average March Rate (km/h)	Best Time for March	Vulnerability to Air Attack
Initial	10-15			20-30	Night	0.9
Long-distance						
Railroad	1-2	200-300+	Up to 500		Night	1.0
Wheeled vehicles	1-2	Under 400	Up to 400		Night	0.7
Trailers	1	150-200+	Up to 500		Night	0.8
Tracked vehicles	1	Under 300	Up to 300		Night	0.7
Total	Up to 6 Av: 2-3					
Tactical	Up to 4	Under 150	Up to 250		Night	0.6
Prebattle						
In regiment formations	6-10	Under 50 Av: 15-20		15-20	Day	0.5
In battalion formations	18-30	Under 20 Av: 10-15		10-15	Day	0.4
In company formations	30-60	Under 10 Av: 4-6		8-12	Day	0.2

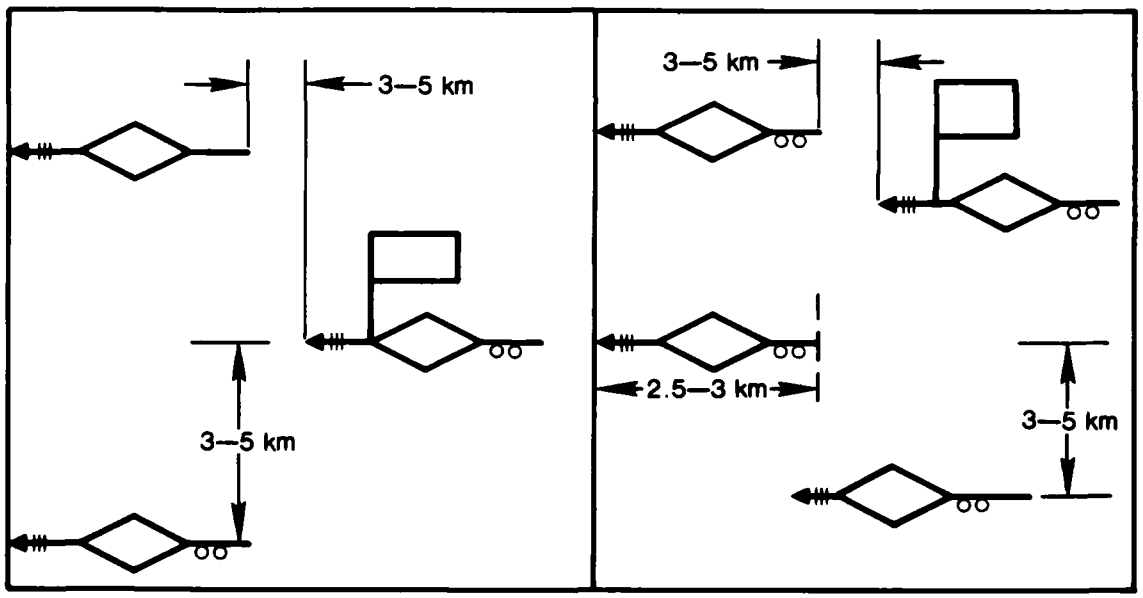
NOTE: Vulnerability to enemy air attack includes both aircraft and helicopters; maximum vulnerability is 1.0.

The Soviet army apparently specifies three types of consecutive prebattle march formations: regimental, battalion, and company. The maneuver regiment normally changes from tactical march formations to prebattle formations when it comes within 15 to 20 kilometers of the forward edge of the battle area (FEBA). Figure 10 illustrates four prebattle formations of a maneuver regiment. The regiment's battalions remain in columns, thereby increasing the number of approach routes from



Line formation
Battalions in columns

Wedge formation
Battalions in columns



Reverse wedge formation
Battalions in columns

Echelon left formation
Battalions in columns

NOTE: Not to scale

Fig. 10—Maneuver regiment prebattle formations

one to four or more. Closer to the FEBA, the battalions deploy into prebattle formations, with their companies moving forward in columns on parallel routes.

The three different prebattle march formations change the configuration of the overall regimental formation. Table 17 indicates the changes in the length and width of the regimental columns.

March Norms

The basic Soviet march unit is the battalion--motorized-rifle, tank, artillery, antiaircraft, engineer, etc. The typical march unit is the tank or motorized-rifle battalion, often referred to as a maneuver battalion (MB). As MBs would probably not be reinforced during initial and long-distance marches, each march column would consist of 40 to 50 (an average of, say, 45) organic vehicles, including trucks of the supply platoon and other organic rear services.

Battalion companies would maintain a distance of approximately 100 meters from each other. The interval between vehicles in initial and long-distance marches might range from 25 to 100 meters.[9] The average

Table 17

CHANGES IN REGIMENTAL PREBATTLE COLUMN SIZE

	Width of Regimental Column	Length of Regimental Column
Tactical march on single route in divisional march formations	A few meters	30 to 50 km
Regimental prebattle march formations	6 to 10 km	12 to 20 km
Battalion prebattle march formations	6 to 10 km	9 to 15 km
Company prebattle march formations	5 to 8 km	8 to 10 km

NOTE: Reconnaissance and march security elements are not figured in regimental prebattle column size.

[9]The interval between vehicles would be a function of speed; the faster the advance, the longer the distance between vehicles. Intervals would thus be shorter in a tactical march than in the earlier stages of march.

interval of 30 meters would create an average density (based on a length of 7 meters for an average vehicle) of 22.5 vehicles per kilometer. The total length of the battalion column, then, would be about 2 kilometers ([45 vehicles x 7 m] + [44 intervals between vehicles x 30 m] + [3 companies x 100 m] = 1935 m).

During a tactical march, maneuver battalions would likely be reinforced until committed to battle. The intervals between vehicles probably would be 25 meters and the distances between companies, about 200 meters. An average battalion would have 90 vehicles (see Table 18). Hence, the maneuver battalion column would be about 3.5 kilometers long ([90 x 7] + [89 x 25] + [3 x 200] = 3455 m). The distance between battalions in tactical and long-distance marches would average 4 kilometers; the distance between regiments would average 5 kilometers.

ASSEMBLY AND DEPARTURE AREAS

Follow-on forces marching to the front would halt periodically to eat, rest, and service their vehicles. Such stops might last from several minutes to several days. They might also pause during daylight hours to avoid potentially vulnerable movements.

The Soviets describe the halting places as departure, assembly, intermediate assembly, and new assembly areas. The march on a given day would likely start from a departure area and end at an assembly area. Troops might halt en route at an intermediate assembly area. Each march trace would show the name and location of the successive halt areas on the road to the front, especially when movement by rail was involved.

The number of areas occupied successively would depend on the type of march, the distance of the initial departure area from the FEBA, and the specific combat situation. A division moving from an alert assembly area in the Belorussian military district, for example, would pass through some 20 assembly and departure areas on its way to battle. In contrast, a first-echelon division already in the main battle area and breaking through NATO's forward defenses in the first assault would have only one assembly area, to which it would move after being relieved on D+2.

Table 18

AVERAGE STRENGTH OF REINFORCED MANEUVER BATTALIONS IN OFFENSIVE

	Tank Battalion	Motorized Rifle Battalion
Main battle tanks	30-40[a]	10-14[b]
Light armored vehicles		
BMP (BMP-1, BMP-3)	12	42
BTR, BMP, BRDM command & combat support vehicles	2	9
SP 122-mm howitzers	6	-
BRDM recce (engr & chemical squad) vehicles	2	2
ZSU-23-4 AA gun or SA missile vehicles	2	2
Unarmored vehicles		
120-mm mortars or Vasilek 82-mm mortars	-	8
122-mm towed howitzers	-	6
Signal platoon vehicles	3	3
UAZ-69/469 jeeps	-	3
GAZ-66 trucks	4	15
ZIL-130 trucks	7	-
Ural-375 trucks	2	-
KRAZ heavy trucks	-	4
Maintenance vans, field kitchens, ambulances, etc.	11	13
ZIL/Ural/KRAZ fuel tank trucks	3	2
Total	82-94	119-123[c]

SOURCES: *Jane's Defence Weekly*, November 24, 1984, p. 938; U.S. Army Training and Doctrine Command, *Soviet Army Operations and Tactics*, FM 100-2-1, Coordinating Draft, August 1982, U.S. GPO, Washington, D.C., 1984; U.S. Department of the Army, Headquarters, *Opposing Forces Europe*, FM-30-102, Washington, D.C., November 18, 1977; U.S. Army Armor Center, *Organization and Equipment of the Soviet Army*, ST-30-20, Fort Knox, Ky., January 1981; U.S. Department of Defense, Defense Intelligence Agency, *Soviet Front Fire Support*, DDB-1130-8-82, September 1982; Lt. Gen. V. G. Reznichenko, *Taktika* (Tactics), Voyenizdat, Moscow, 1984. The Soviet MR battalion in the GSFG is detailed in *International Defense Review*, September 1985, p. 1385.

NOTES: The tank battalion is reinforced with a motorized rifle company, artillery battery, antiaircraft platoon, and engineer platoon. The motorized rifle battalion is reinforced with a tank company, artillery battery, antiaircraft platoon, and engineer platoon.

[a]When the tank battalion comes from a motorized rifle regiment.

[b]When the tank company comes from the tank battalion of a motorized rifle regiment.

[c]When an MR battalion operates with BTRs, it has an organic antitank platoon, possibly consisting of 4 BTR-60Bs with various antiarmor weapons.

Unt'l 1971, the Soviet military disagreed as to whether urban, wooded, or open areas made the best temporary assembly and rest stops for troops moving forward. Since then, however, they have come to regard large wooded areas and high buildings as particularly vulnerable to nuclear strikes. Many now consider relatively small wooded areas with ready access to roads best suited for hiding and thus protecting troops and command posts.

As a rule, the appropriate commands will choose in advance the areas that the troops would occupy in wartime. Prior to final selection, the areas would be reconnoitered by air, and where possible, by reconnaissance, chemical, and engineering units on the ground. When necessary, the locations would be selected during the course of the conflict.

Follow-on echelon units would probably use the same assembly areas that the leading formations had used on their way to the front. Today, when many vehicles leave clearly visible tracks, the Soviets would probably try to utilize areas previously occupied by units with tracked vehicles so as to minimize detection by aerial reconnaissance.

The length of time that a unit would occupy an assembly area would depend on the distance of the area from the main battle area, the purpose of the stop (waiting, departure, assembly, rest, halt, or entrainment), the mission of the force occupying the area, and the combat situation. A short halt might last 20 minutes to 1 hour; a long halt, 1 to 2 hours; and a day or night halt, 6 to 8 or more hours.

Units moving to the battlefront would not plan their halts in advance. They would probably spend 10 to 12 hours per day on the road[10] and the remaining 12 to 14 hours in halting areas maintaining combat equipment, relaxing, eating, forming columns, and camouflaging the long-rest area or new assembly area. If for some reason a unit could not move forward as planned, another unit or units might leapfrog it.

Figure 11 depicts the structure of a typical march between the departure area and the assembly area. Table 19 presents data for

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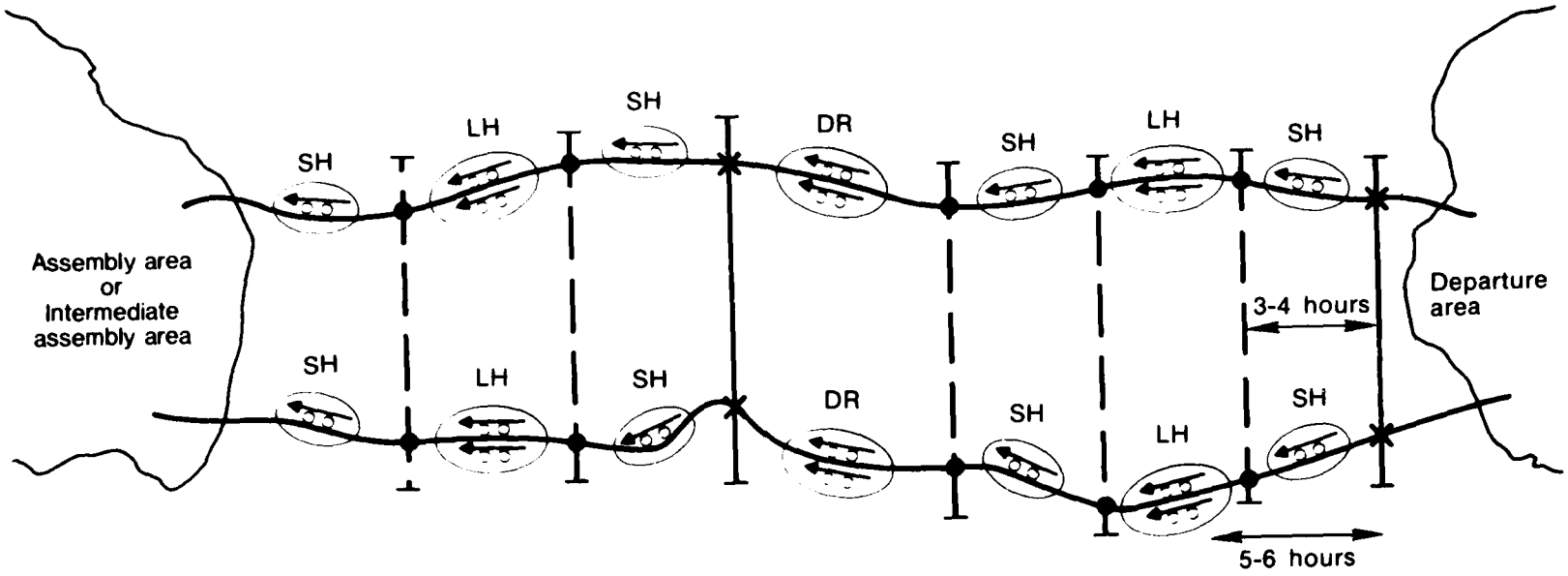
[10]Lt. Gen. V. G. Reznichenko, *Taktika* (Tactics), Voyenizdat, Moscow, 1984, p. 228.



KEY

Departure line

Control line

Departure point

Control point

Troops dispersed off road

Troops dispersed on right side of road at intervals of at least 10 m

DR — Day rest after night march
SH — Short halt (up to 1 hour)
LH — Long halt (up to 2 hours)

NOTE: Not to scale.

SOURCE: Based on Lt. Gen. V. G. Reznichenko, *Taktika* (Tactics), Voyenizdat, Moscow, 1984, Fig. 15.

Fig. 11—Structure of a typical march between departure area and assembly area

Table 19

ESTIMATED SIZE OF OFF-ROAD SHORT-HALT AREAS
OF UNDISPERSED MANEUVER BATTALIONS

March Halt Deployment[a]	Length	Width	Area[b]
Long-distance march			
1 column	2000 m	--	--
2 parallel columns	1000 m	250 m	250,000 sq m (25 ha)
3 parallel columns	660 m	500 m	330,000 sq m (33 ha)
4 parallel columns	500 m	750 m	375,000 sq m (38 ha)
Tactical march			
1 column	3500 m	--	--
2 parallel columns	1750 m	250 m	437,500 sq m (44 ha)
3 parallel columns	1200 m	500 m	600,000 sq m (60 ha)
4 parallel columns	875 m	750 m	656,250 sq m (66 ha)

[a]Columns are halted off the road, 200 m to 300 m from each other (average = 250 m).

[b]One hectare (ha) = 10,000 square meters or .386 square miles.

estimating the size of the areas occupied by maneuver battalions during short halts en route to the front. These calculations would also apply to patterns of command post relocation.

RAILROAD TRANSPORT

In a future war, railroad transport would play an important role in the movement of Soviet forces at the strategic (front and above) and theater strategic (TVD) levels. During World War II, Soviet railroads extended directly to the front lines. Only in the course of a major offensive did advancing ground forces venture as far as 600 kilometers from railroads. The Soviets usually succeeded in sustaining operations on these railroads, even in the face of German air attacks. After an attack, an army of Soviet railroad construction troops more than one million strong repaired damaged lines at a ratio of two or three attacks to one reconstruction.

Because it is powered largely by electricity, the contemporary Soviet and Eastern European rail system is considerably more vulnerable to enemy air attack. However, although the WP countries have only a limited number of locomotives with internal combustion engines, they have enough for the most urgent transport of the army in the field. The Soviets would use electric trains mainly in the deep rear, beyond direct range of enemy fire.

The use of broad-gauge (1524-mm or 5-ft) tracks in the USSR and standard-gauge (1432-mm or 4.75-ft) throughout Europe would complicate the movement of troops and equipment to the Western TVD. Some broad-gauge tracks have been laid in Eastern Europe, for example, the L'vov-Krakow-Katowice-Wroclaw-GDR line. In the absence of such tracks, the Soviets must either reload from one train to another or replace the broad-gauge undercarriage with a standard-gauge one at the USSR border.

Thanks to modern technology, however, the Soviets have incomparably greater capabilities for rebuilding and repairing tracks and bridges than they had in World War II. Soviet railroad construction troops, if unhampered by enemy fire, may be assumed to have the following productivity rate:

- Widening of European tracks to Soviet wide-gauge standard--50 to 100 kilometers per day
- Reconstruction of destroyed lines--30 to 80 kilometers per day
- Reconstruction of railroad bridges--100 to 200 meters per day.

On the eve of military operations, the conversion of some rail lines from standard to broad gauge would proceed even faster than the 100 kilometers per day estimated above. The Soviets could widen the tracks of the major railroads that run from the USSR frontier to the Oder-Neisse river line in three or four days before the outbreak of a war to facilitate the regrouping of forces from the USSR to western Poland and the GDR. The rapid and massive laying of railroads would thus provide an important early-warning indicator for NATO to monitor.

Assuming that mobilization began on D-10, the Soviets would have nine days in which to move troops to the battle area on existing peacetime wide-gauge tracks in the Eastern European countries; on tracks widened between D-10 and D-6, they would have five to six days. Thus, by D-day they could regroup at least 30 divisions by rail from the USSR to East Germany and Czechoslovakia. They would move the remaining forces after D-day.

Both prior to and during the war, the movement of follow-on forces by rail would probably terminate some 250 to 300 kilometers short of the main battle area. During the prewar reinforcement movements and the first days of the war, Soviet troops arriving from the western USSR military districts would detrain on the east bank of the Oder and Neisse rivers; farther south, they would stop east of the Prague-Brno line.

As the war continued, the debarkation area would move westward. By the time NATO forces could destroy the main railroad bridges over the Oder-Neisse in the second or third day of a war in which the Warsaw Pact had ten days to two weeks to mobilize, Soviet troop trains would already have been unloading for several days on the west side of the river to a distance of 50 kilometers inside East Germany.

The transport by rail of one tank or motorized rifle division would require 30 to 40 trains of up to 65 cars each. These would include roughly 400 4-axle, 50-ton, load-bearing platform cars per division.[11] Thus, a division should have access to two railroad stations for loading and three for unloading. Each station would need at least two entraining or detraining points.

For transport by rail, a division would be split into troop train units, with one troop train unit allocated to each train. The average troop train unit for a tank or motorized rifle division would include 300 to 400 men and 60 to 80 vehicles.

The following average times would be required for various processes associated with preparing a single troop train unit, when the preparations were not impeded by enemy action:

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[11]Most of the data on movement by railroad appear in Reznichenko (1984), pp. 251-257.

- Loading--3 to 5 hours
- Unloading--2 to 4 hours
- Reloading (from one train to another)--5 to 10 hours
- Transfer from Soviet to European track--1 to 3 hours

The theater strategic level would control rail transport, as well as its antiaircraft and antidiversionary defense. Divisional air defense means would not cover movement by railroad. Although the rate of unimpeded westward movement might reach 800 kilometers per day,[12] enemy attacks on rail lines, key junctions, and trains could slow movement by as much as 50 percent. An average air-defense force of one troop train unit would consist of 5 to 30 antiaircraft machine guns (7.62 to 12.7 mm);[13] 1 or 2 missile systems (SA-6, SA-9, etc.) and/or 1 or 2 antiaircraft guns (ZSU 23-mm class); and 2 to 6 man-pack missile systems (SA-7 *Grail* class).

TRAILER TRANSPORT

The Soviets often use trailers to transport main battle tanks and other tracked combat vehicles in the rear, especially between railheads and rear assembly areas. These distances would gradually increase after the offensive began and might reach more than 400 kilometers.

The front headquarters would organize trailer transport, while appointed army staffs would direct the movement of the divisions. Special heavy-lift tank trailer regiments belonging to the reserves of the Supreme High Command would be placed at the disposal of the front for the operation. The front would also see to the antiaircraft, antiairborne, and antidiversionary defense of the transport.

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[12]According to one source, Soviet troop trains in World War II sometimes attained 1000 kilometers per day in the deep rear, with an average rate of 500 kilometers per day; see I. V. Kovalev, *Transport v velikoy otechestvennoy voyne 1941-45 gg.* (Transportation in the Great Patriotic War, 1941-45), Nauka, Moscow, 1981, p. 464. A rate of 200 to 250 kilometers per day seems more realistic; see *Armeyskiye operatsii* (Army Operations), edited by A. I. Radziyevskiy, Voyenizdat, Moscow, 1977, p. 244.

[13]These figures include all AA guns mounted on tanks and other transported vehicles.

Trailers, which move much faster than tracked vehicles moving on their own tracks, usually travel in separate convoys and by separate routes. A tank division on trailers travels along two to four routes, each route separated by at least 3 kilometers. Loaded trailers average 30 to 40 kilometers per hour by day and 25 to 30 kilometers by night when unopposed. The assignment of two drivers to each trailer reduces the number of short halts and eliminates long halts altogether. Thus, the net speed of trailer transportation would be 50 percent greater than that of normal march.

Reznichenko offers the following norms for the movement of equipment by trailers:[14]

- Trailers should maintain a distance of up to 50 meters from the next vehicle.
- Trailers should cross railroad tracks at no more than 15 kilometers per hour.
- A trailer can be loaded in 15 minutes or less. A tank company can be loaded in 20 minutes or less with simultaneous loading; otherwise, in 60 minutes or less. With simultaneous loading of its companies, a tank battalion can be loaded in 30 to 40 minutes.
- On average, a tank company can unload in 30 minutes and a tank battalion in 45 minutes.

COMMAND POSTS

Size and Responsibility

Fronts and armies have forward, main, rear, alternate main, and alternate rear command posts; divisions have all but alternate rear CPs. Specially trained engineering units build these fortified command posts in peacetime to protect military commanders and their staffs in wartime.

The underground CP bunkers are fitted with the appropriate staff and communication support facilities. In the field, command posts are most frequently located on military sites, including large peacetime

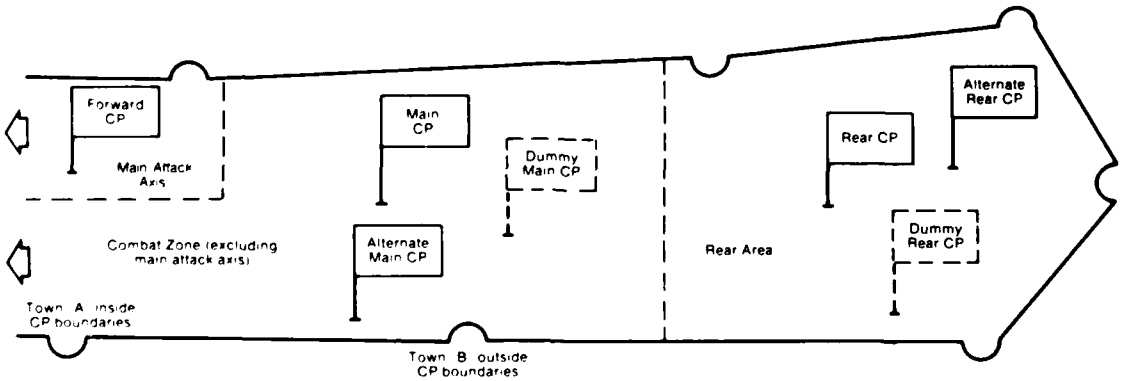
[14]Reznichenko (1984), pp. 246-251.

training camps, in heavily forested areas. The locations of the CPs are known to only a limited number of officers.

To provide maximum protection against conventional and nuclear strikes, the command bunkers are well camouflaged and dispersed. In wartime, the Soviets would use disinformation to mislead the enemy as to the location, level, and nature of the CPs. The bunkers are fully equipped to operate in nuclear and chemical conditions, and are protected against enemy infiltration.

The size and areas of responsibility of Soviet division, army, and front CPs in a first offensive are illustrated in Fig. 12. These are actual, rather than theoretical, areas of direct influence in terms of the effect that the destruction of any one of them would have. Table 20 gives the distance of the various CPs from the FEBA.

Command posts at all levels would have a relatively large number of personnel and vehicles, as indicated in Table 20. The posts need large staffs to provide the redundancy and integration required for the Soviet command and control network. Personnel would include representatives of the higher command, as well as of flank, detached, support, and accompanying forces, each with his own means of communication. Table 21 lists the units that would protect and defend the CPs in an offensive.



NOTE The estimated number of men and vehicles area and distance of command posts from line of contact appear in Table 20 below

Fig. 12—Soviet command posts in offensive: areas of direct influence in own territory

Table 20

SOVIET FIELD COMMAND POSTS IN OFFENSIVE: ESTIMATED MEN, VEHICLES, AREA, AND DISTANCE FROM LINE OF CONTACT (LoC)

Command Post	Men	Vehicles	Area[a]	Km from LoC[b]
		Division[c]		
Forward	50-80	15-20	2-4 hectares (ha) or 1-2 buildings in urban areas	5-8
Main	650-800	120-150	1-1.5 sq km	10-15
Alternate main	90-150	20-40	Up to 4 ha or 2-3 bldgs	10-15
Rear	800-900	150-200	1.5-2 sq km	20-25
		Army		
Forward	100-120	25-30	4-6 ha or 1-2 buildings	8-15
Main	1500-1800	250-300	3-4 sq km	30-40
Alternate main	250-300	50-80	8-10 ha or 3-4 buildings	30-40
Rear	2000-2500	300-400	4-5 sq km	60-70
Alternate rear	150-200	30-50	4-8 ha or 3-4 buildings	60-70
		Front		
Forward	150-180	35-40	5-7 ha or 2-3 buildings	10-30
Main	3500-4000+	450-500+	7-8 sq km	100-150
Alternate main	500-700	100-150	1-1.5 sq km or 1 block	100-150
Rear	4000-5000	600-800+	8-10 sq km	175-225
Alternate rear	350-500	60-80	9-10 ha or 1 block	175-225

NOTES: Estimates of men, vehicles, and area occupied include, in addition to the CPs, all headquarters service and support, protection, and defense units (see Table 21); also liaison and representative groups of flank, subordinated, attached, support, and accompanying forces and second echelons (or OMGs). Vehicles include helicopters and short takeoff and landing (STOL) liaison aircraft.

[a]On short halts during marches, areas are much smaller; vehicles usually remain in march columns, parallel to and up to 100 meters from the right side of the road, taking advantage of natural camouflage.

[b]Distances are approximate and apply only to the first stage of the offensive. Distances will increase radically during battle in the enemy operational rear.

[c]Divisions usually do not have alternate rear CPs.

Table 21

UNITS DIRECTLY PROTECTING AND DEFENDING COMMAND POSTS IN OFFENSIVE

Type of Protection or Defense	Average Norms for Support at Given Level		
	Division	Army	Front
Forward CP			
Air defense	Platoon	Battery	1 to 2 batteries
Maneuver force[a]	Platoon	Company	Company
Military police[b]	--	Squad	Platoon
Engineer[c]	Squad	Squad	Platoon
Main CP			
Air defense	Battalion	Regiment	Brigade
Maneuver force	1 to 2 companies	Battalion	Regiment
Military police	Platoon	Company	Battalion
Antitank	Battery[d]	Battalion	--
Engineer	Company	Battalion	Regiment
Alternate main CP			
Air defense	Platoon	Battery	Battalion
Maneuver force	Platoon	Company	Company
Military police	--	Squad	Platoon
Engineer	Squad	Platoon	Company
Rear CP			
Air defense	Battery	Up to 2 batteries	Battalion
Maneuver force	Company	Up to 1 bn	Battalion
Military police	Squad	Company	Battalion
Engineer	Platoon	Company	Battalion
Alternate rear CP			
Air defense	--	Platoon	Battery
Maneuver force	--	Platoon	Company
Military police	--	Squad	Squad
Engineer	--	Squad	Platoon

[a]Tank and/or motorized rifle units.

[b]Units of *Komendantskaya sluzhba* used to control traffic.

[c]Specially trained for CP service.

[d]In motorized rifle divisions only.

On the eve of an opening offensive, small groups of front-level command personnel would move at different times from their peacetime garrisons to fortified command bunkers in the field. This would probably occur on the night of D-5 to D-4 and/or the night of D-4 to D-3. Dummy sites would also be prepared in order to mislead enemy intelligence.

Similar bunkered CPs would serve as the headquarters for armies deployed in the first strategic echelon. Like the front CPs, the army bunkers would be manned gradually during a developing crisis. This might occur simultaneously with, or immediately before or after, the activation of the front CPs. Most first-line divisions located near NATO countries would also have prepared CPs.

Relocation During Offensive

The main rules and norms for the relocation of Soviet CPs are as follows:

- Only one of the three command posts--forward, main, or rear--at a given command level, may move at a given time. The alternate main and rear CPs must move at different times from the primary main and rear CPs that they support.
- When the forward CP relocates, the main CP takes over its directing responsibilities and vice versa. The alternate main CP, however, never serves as the forward CP.
- At the front and army level, each forward and alternate CP moves as a single entity, whereas each main and rear CP moves in three groups.

If the main command post of, say, an army were relocating, the first group to move out might include some officers and men; communication, traffic control, and terrain-development engineering equipment; and military police (*komendantskaya sluzhba*) and air-defense subunits. On receiving word that the first group of the CP had prepared the new location and set up a signal center, a small group of officers, mainly from the operations and artillery departments, would move forward

by helicopter. The deputy chief of staff (or, the chief of staff if the commanding general was at the main CP) would direct the operation.

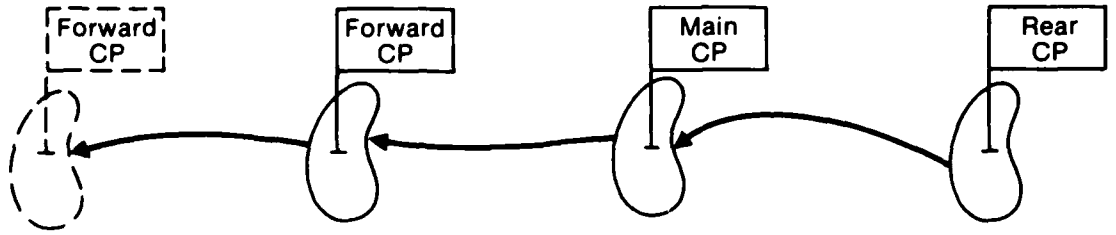
Once the second group had settled into the new location, the third group, composed of the majority of command personnel and equipment, would follow in its own cars, tanks, and other tracked vehicles. These vehicles would observe march procedures during the move, including digging in during each long halt. A superior command would have to approve the relocation of this group, which would contain approximately 90 percent of the total CP personnel.

A link team, consisting of a small group of officers and several signal troops, would remain behind until the entire third group had reached its next destination. The team would continue to receive incoming reports; it might also await the arrival of another CP.

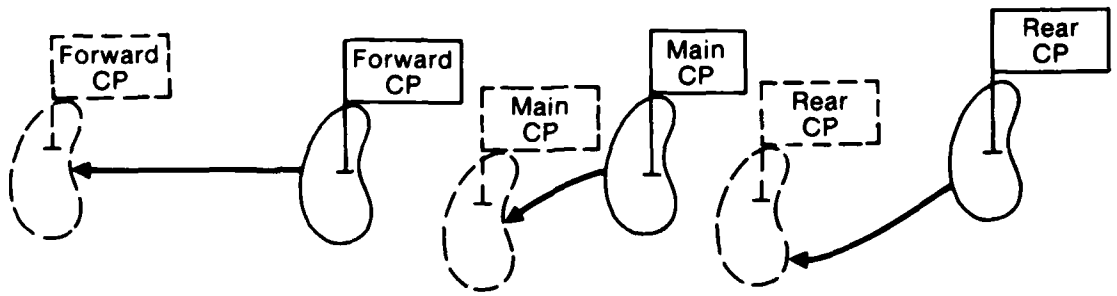
The Soviets follow three procedures in relocating CPs: Command posts may move into bunkers previously occupied by other CPs; they may move to entirely new areas; or they may do both (see Fig. 13). For example, the rear CP might take over the location previously occupied by the main CP. Occasionally, the main CP, having moved into an area previously occupied by the forward CP, might for a short time operate jointly with the forward CP before the latter moved on.

During World War II, CPs usually moved forward into areas previously occupied by other CPs so as to take advantage ef existing bunkers and communication lines. Field telephones, the main communication link at the time, required extensive land lines, which were time-consuming to lay. By moving into a previously occupied CP, the new team could immediately plug into the existing field telephone network.

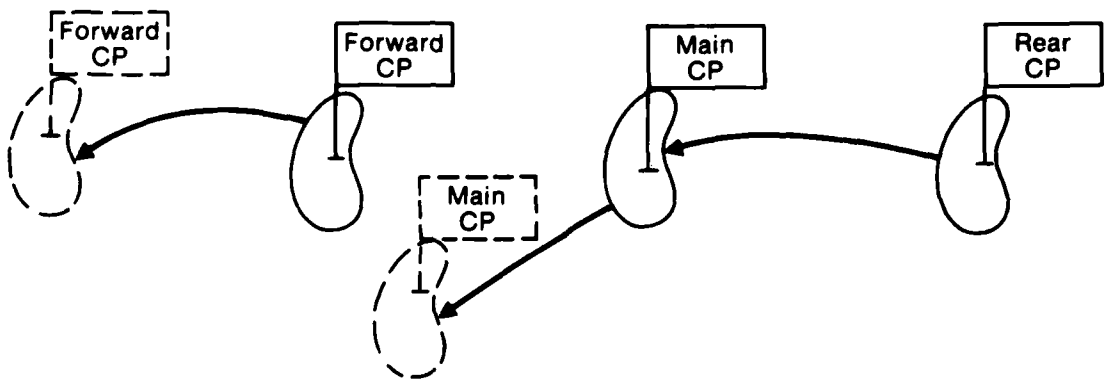
Today, advanced telecommunications operating on various radio frequencies would play the major role in the flow of information between the various CPs prior to the commitment of forces, when radio silence would generally be enforced. The modern system would greatly reduce the premium on successive movements within an established network of land lines. Consequently, the second method, the relocation of CPs to entirely new locations, would be used most frequently in a future war. The third, combined method would be used primarily in relocating main and rear command posts.



Move to bunkers previously occupied by other CPs



Move to new areas



Move to both new and previously occupied areas

Fig. 13—Procedures for relocating command posts

The alternate CP would replace the main CP if the latter were knocked out of action. Hence, alternate CPs would be manned by a small group of specialist officers drawn from all of the most important fields. The first deputy commander of the army or front would in most cases head the alternate CP. This skeleton staff would be kept continuously informed of the current combat situation so that it would be prepared to assume control of subordinate forces at any moment.

To increase the survivability of alternate CPs (both main and rear), the following norms circumscribe their activities:

- Prior to their full activation, alternate CPs must not break radio silence; they are limited to receiving and copying the flow of message traffic.
- They are prohibited from moving into places previously occupied by other CPs.
- They may not relocate when the main CP, or more precisely, its large third group, is moving.
- They must carefully camouflage themselves and dig in.
- They have relatively more armored combat vehicles (command tanks, APCs, air defense self-propelled launchers, etc.) than other CPs, except the forward CP.
- They must travel by land, not air (including helicopters).

The time required for the relocation of army and front main CPs is shown in Table 22. The estimated frequency and distance of relocation appear in Table 23.

When the forward CP was on the move, the main CP would assume its control responsibilities, and vice versa. When the third group of the main CP was moving, the second group would take on the function of the main CP. When the rear CP was moving, the forward logistic command group, located in the main CP, would temporarily exercise control over the rear services. This group, headed by the first deputy chief of rear services, consists of a small number of rear service specialists.

Table 22

ESTIMATED TIME REQUIRED FOR RELOCATION OF ARMY AND FRONT MAIN COMMAND POSTS WITHOUT ENEMY OPPOSITION

	Relocation Time (in Hours)	
Relocation Steps	Army Main CP	Front Main CP
Pull out	0.5 to 1	1 to 1.5
Pass departure point	0.5 to 1	1.5 to 2
March (army CP: 30-50 km, front CP: 100-150 km)	1.5 to 3	7 to 10
Transfer to new CP area	0.5 to 1	1 to 2
Deploy in new CP	0.5 to 1	1 to 2
Total	3.5 to 7	11.5 to 17.5

NOTES: An army or front main command post usually moves in three groups; the table gives times for the movement of the third (main) group.

Table 23

ESTIMATED NUMBER AND DISTANCE OF KEY COMMAND POST RELOCATIONS ON MAIN ATTACK AXIS IN FIRST FIVE DAYS OF THEATER NONNUCLEAR WAR

	D-Day	D+1	D+2	D+3	D+4
Division CP					
Forward					
Number of moves	2	1	1-2	2-4	Constant
Distance (km)	10-15	10	10-15	15-20	movement
Main					
Number of moves	1	1	1	1-2	2-3
Distance (km)	15-25	15-20	15-25	20	20-25
Rear					
Number of moves	0	0-1	0-1	1	1
Distance (km)	0	30-40	30-50	30-50	40-60
Army CP					
Forward					
Number of moves	1	0-1	1	2-3	3-4
Distance (km)	15-20	10-15	10-15	20-50	20-25
Main					
Number of moves	0	0-1	0-1	1	1
Distance (km)	0	25-30	25-30	25-40	30-50
Rear					
Number of moves	0	0	0	0-1	1
Distance (km)	0	0	0	60-80	100
Front CP					
Forward					
Number of moves	0-1	0-1	1	1-2	2-3
Distance (km)	20-30	15-20	20-30	20-25	20-30
Main					
Number of moves	0	0	0	0-1	0-1
Distance (km)	0	0	0	100-130	100-150
Rear					
Number of moves	0	0	0	0	0-1
Distance (km)	0	0	0	0	150

NOTES: Data in this table are based on the offensive norms described in Tables 12 and 13. Average distances represent one move, not all moves on that day. The movements of the alternate main and alternate rear CPs would correspond to but not occur simultaneously with the movements of the main and rear CPs. When a CP is moving, other CPs at the same level (division, army, or front) remain in place. From D+4 (or sometimes D+3) on, the division (and sometimes the army) forward CP moves constantly, with only short halts.

The alternate CP would move less often than the main CP; that is, the army alternate CP would normally not move more than every 48 hours and the front CP not more than every 72 to 96 hours. No other CP would take over the mission of the alternate CP while it relocated.

The locations of the key CPs during the march from the rear to the combat zone are depicted in Table 24. During marching halts, all vehicles leave the road and camouflage themselves. The CPs would stay in their vehicles in line formation for short halts and disperse and dig in during long halts.

Table 24

PROBABLE LOCATION OF KEY COMMAND POSTS DURING MARCH FROM REAR TO FORWARD AREA

	Long-Distance March	Tactical March	Prebattle March
Division main CP	Head column of main body	Between 1st and 2d echelon of main body	Between 1st and 2d echelon of main body
Division forward CP	In new assembly area (moved by air)	Head column of 1st-echelon main body	2d column of 1st-echelon main body
Army main CP	Head column of forward main body	Between 1st and 2d echelon of main body	Between 1st and 2d echelon of main body
Army forward CP	In new assembly area (moved by air)	Head column of 1st-echelon main body	Head column of 1st-echelon main body
Front main CP	In fortified field CP prepared in peacetime	In fortified field CP prepared in peacetime	In fortified main CP prepared in peacetime

Specially attached air-defense units would protect the CPs during relocation. Each column of the CP would have its own air-defense means. Special fighter-interceptor units would be allocated to the relocation area to defend a relocating front CP (especially main and rear) from the air.

VI. SCENARIOS FOR FIRST FIVE DAYS OF CONFLICT

This section describes the hypothetical missions and movements of four representative Soviet maneuver divisions during the first five days of a conventional NATO-WP war launched by the USSR after ten days of mobilization. The scenarios are designed to illustrate the activities of the specialized high-speed exploitation forces discussed in Sec. V and the numerical and procedural norms set forth in Sec. VI, in the context of the organizational concepts and force and command structure (including strategic echelonment) elucidated in Part One.

All four divisions (one motorized rifle and three tank) are assigned to the first strategic echelon: The first two belong to the first operational echelon; the third and fourth form part of the second operational echelon. When hostilities begin, the representative divisions are positioned at various distances from the initial line of contact, as follows and as illustrated in Fig. 14:

- The first, a motorized rifle division, will take part in the initial assault; its lead regiments have approached to within a few kilometers of the FRG-GDR border.
- The second, a tank division configured as a specially reinforced operational maneuver group in a first-echelon army, is moving forward from an assembly area some 60 to 80 kilometers east of the border.
- The third, another tank division, is a lead element of a second-echelon tank army; it is advancing from an assembly area near its peacetime garrison in Dresden, East Germany, approximately 250 kilometers east of the FRG-GDR border.
- The fourth, also a tank division, was fully manned during mobilization and is waiting at its peacetime garrisons near Lepel', Belorussian military district, some 1500 kilometers east of the FRG-GDR border. It will go into battle as a lead element of a second-echelon tank front.

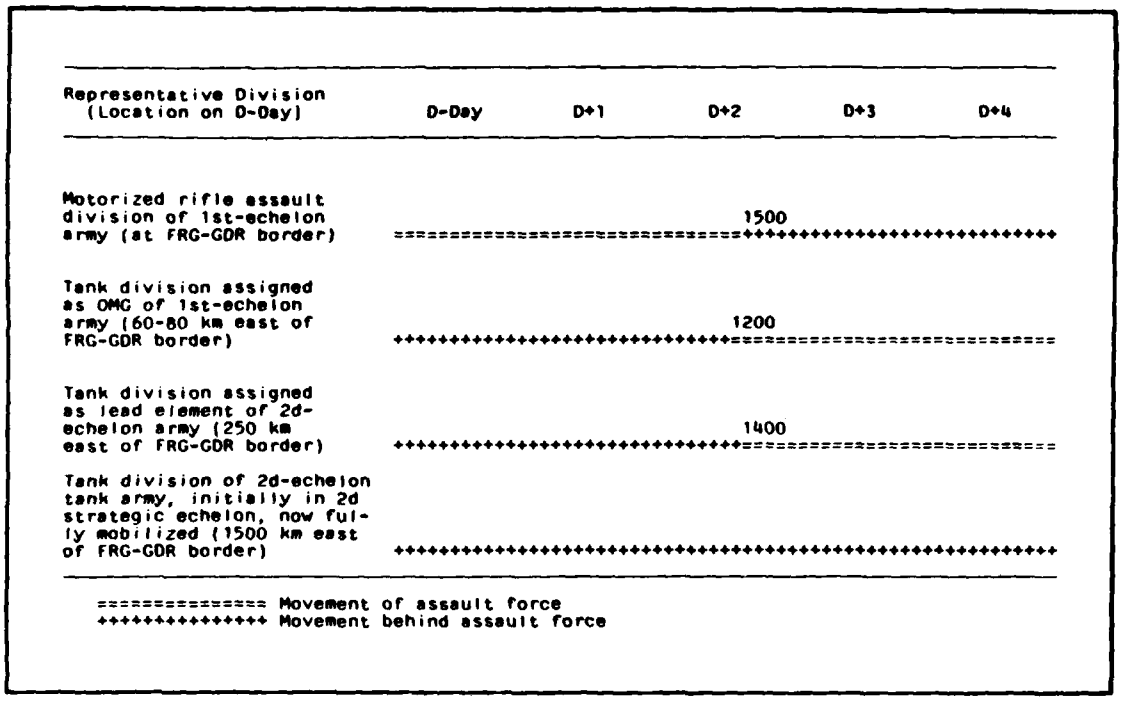


Fig. 14 -- Movements of four representative maneuver divisions in first five days of theater conventional war

Western military literature describes in detail the battle activities of frontline maneuver units, such as the first and second representative divisions.[1] Less has been written, however, about movement from rear areas to the battle zone. This account, therefore, briefly sketches scenarios for the first two divisions and concentrates on the third and fourth.

The scenario for the third representative division depicts the long-distance march and the march in regimental prebattle formations to the battle area. The scenario for the fourth representative division illustrates current norms and procedures for combined railroad-trailer

[1]See, for example, U.S. Army Training and Doctrine Command, *Soviet Army Operations and Tactics*, FM 100-2-1, Coordinating Draft, August 1982, U.S. Government Printing Office, Washington, D.C., 1984, pp. 5-1 to 5-12.

transportation from the deep rear to the battle zone. It takes the division through the sixth day of battle, because if a second-echelon army starts to move forward from a garrison inside the USSR on D-day, it will not be ready for commitment to battle until at least D+6.

FIRST REPRESENTATIVE DIVISION

Scenario Assumptions

The scenario for the first representative division assumes that the division has been deployed near the FRG-GDR border since D-9. Its operational deployment (*operativnoye razvertyvaniye*) in assigned wartime departure areas took place under cover of army-level maneuvers, which continued until D-1. During these maneuvers, the division reached the wartime manpower and equipment levels specified in its table of organization and equipment (TO&E).[2] In addition, 0.5 to 1.5 fire units (*boyekomplekty*) were delivered to the divisional assembly area (*rayon sosredotocheniya*) to support the organic fire support elements.

Reinforcement and Support. Reinforcement for the division arrives on D-1, mainly during the night. It includes

- One regiment of 130-mm cannons from the front-level artillery division
- One regiment of BM-27 multiple rocket launchers (MRLs) from the army level
- One battalion of 160-mm mortars from the artillery reserve of the Western TVD high command
- One river-crossing assault battalion from the army level
- One squadron of Mi-24 assault helicopters from army aviation.

Some of the reinforcement units had been subordinated to the commander of the first representative division during the prewar maneuvers. By D-day, all are operationally subordinated to him. On D-1, commanders and representatives of army units assigned to support the division at the outbreak of war deploy to the divisional main

[2]The Russian equivalent is *tabel'naya chislennost' lichnogo sostava i tabel'nyye sredstva* (table of personnel and equipment).

command post. At H-8, the division commander takes operational command of the local GDR border troop brigade (minus one battalion).

The first representative division commander is informed that the army artillery group (AAG) will support his division with 72 guns on D-day, when the division will also receive the following air and air-defense support:

- A fighter-bomber division with a limit of 108 sorties--on call
- A ground attack fighter division with a limit of 216 sorties--on call
- An interceptor aviation regiment to defend the assembly areas occupied by the division--on airborne alert (*dezhurstvo v vozdukhe*)
- A brigade of mobile surface-to-air missiles from the army level
- An antiaircraft artillery battalion from the local territorial air defense.

The commanders of the organic, reinforcement, and support units of the first representative division, as well as most of their senior officers, know the battlefield terrain. They receive their combat orders before D-day.

Combat Mission. The commander of the first-echelon army assigns the first representative division to the army first echelon on the army's main axis. His operational directive (*operativnaya direktiva*) gives the division the following combat mission:

- Rout the enemy covering force area (CFA) directly facing it, 22 kilometers deep in the direction of the division's main axis of attack.
- Execute the immediate objective, as follows: After a short, intensive fire preparation, attack the enemy in the main battle area from the march and capture the entire depth of the enemy brigade rear.
- Execute the subsequent objective: Destroy enemy divisional reserves and seize town X; secure the commitment of the second representative division to battle on the left wing; and

continue the offensive in the direction of Y-Z, taking advantage of the success of the second representative division.

After analyzing the operational directive, as well as data about the enemy, the terrain, the quantity and quality of his own organic and support units, and other factors,[3] the division commander decides to

- Conduct the main thrust on his left wing.
- Deploy the division as follows:
  - -- First echelon--three motorized rifle (MR) regiments
  - -- Second echelon--the tank regiment
  - -- Divisional reserve--one MR battalion from the right-wing MR regiment
  - -- First divisional raiding detachment--one battalion of GDR border troops reinforced with one tank company and one self-propelled (SP) artillery battalion from the divisional artillery regiment, one company from the divisional reconnaissance battalion, and one sapper platoon
  - -- Second divisional raiding detachment--similar composition to first
  - -- Divisional forward detachment--one MR battalion (from the left wing MR regiment) without BMP infantry fighting vehicles, one battalion of SP 122-mm howitzers, and one battery of 23-mm antiaircraft cannons--supported by one squadron of MI-24 *Hind* helicopters
  - -- Divisional artillery group (DAG)--the three artillery units received as reinforcements from the army, front, and TVD high command (headed by the commander of the 130-mm cannon regiment)
  - -- Other elements (special reserves, including engineering and antitank) and detachments (including traffic control and movement support).

[3]This technique approximates the U.S. Army METT-T method.

- Establish two breakthrough sectors in the 20-kilometer-wide divisional offensive sector--one, 4 kilometers wide, on the left wing; the other, 5 kilometers wide, on the right wing--to simultaneously assault the NATO CFA.
- After passing through the CFA as rapidly as possible on D-day, assault the first line of the main battle area directly from the march; concentrate the division's primary strength on its left wing.
- Mount an initial fire preparation, relying on support from the army artillery group and using all of the organic artillery, multiple rocket launchers, and main battle tanks.

Fire Assets. The first representative division will have 625 tubes and launchers at its disposal for the initial fire preparation: The four army artillery battalions will provide 72; all divisional artillery battalions--126; all regimental artillery battalions--126; 120-mm mortars of the MR battalions, including first echelons of regiments--36; and main battle tanks--265 (which will participate only in the first phase of fire preparation).

The 625 tubes and launchers will provide the following fire densities:

- For the initial assault against the NATO covering force
  - -- 50 tubes and launchers per kilometer on the left breakthrough sector
  - -- 40 tubes and launchers per kilometer on the right breakthrough sector
  - -- 19 tubes and launchers per kilometer in the remaining portions of the attack sector.
- For the breakthrough of the NATO main defensive positions
  - -- 80 tubes and launchers per kilometer on the division's left breakthrough sector
  - -- 14 tubes and launchers per kilometer in the division's remaining sector.

Because of the losses that they will sustain in the battle against the covering force, the first representative division will have fewer tubes and launchers available for assisting breakthrough operations at the NATO general defense position (GDP).

D-Day, 0500 to 0530

The initial fire preparation lasts 30 minutes and covers the entire 22-kilometer depth of the NATO covering force area, which is 20 kilometers wide in the division's breakthrough sector (see Fig. 15). During the fire preparation on the CFA, some important targets of the main battle area are also struck. The following assets in the divisional zone of offensive take part in the fire preparation:

- Artillery
  - -- Part of the army artillery group
  - -- The entire divisional artillery group
  - -- Most of the artillery of the second representative division
  - -- Three regimental artillery groups (RAGs)
  - -- The battalion artillery (120-mm mortars) of the first-echelon regiments.
- Aviation
  - -- Part of the front air army, including fighters, bombers, and ground attack aviation
  - -- Part of the army aviation, including ground attack fighters temporarily assigned from the front air army and fire support helicopters
  - -- Divisional organic and temporarily attached fire support helicopters.
- Tanks--all 265 organic main battle tanks (MBTs) from their departure areas.[4] Of these, 120 are in first-echelon tank

[4]Main battle tanks may be expected to participate in fire preparation because WP maneuver divisions now have more tanks than artillery tubes. Counting only organic tanks and tubes, a motorized rifle division has 204 tubes and 214 to 265 MBTs; a tank division has 180 tubes and 322 MBTs. According to an authoritative Polish military journal, "tanks of the division's second echelon (sometimes even of the regiment's second echelon) may be used for indirect fire." See Lt. Col.

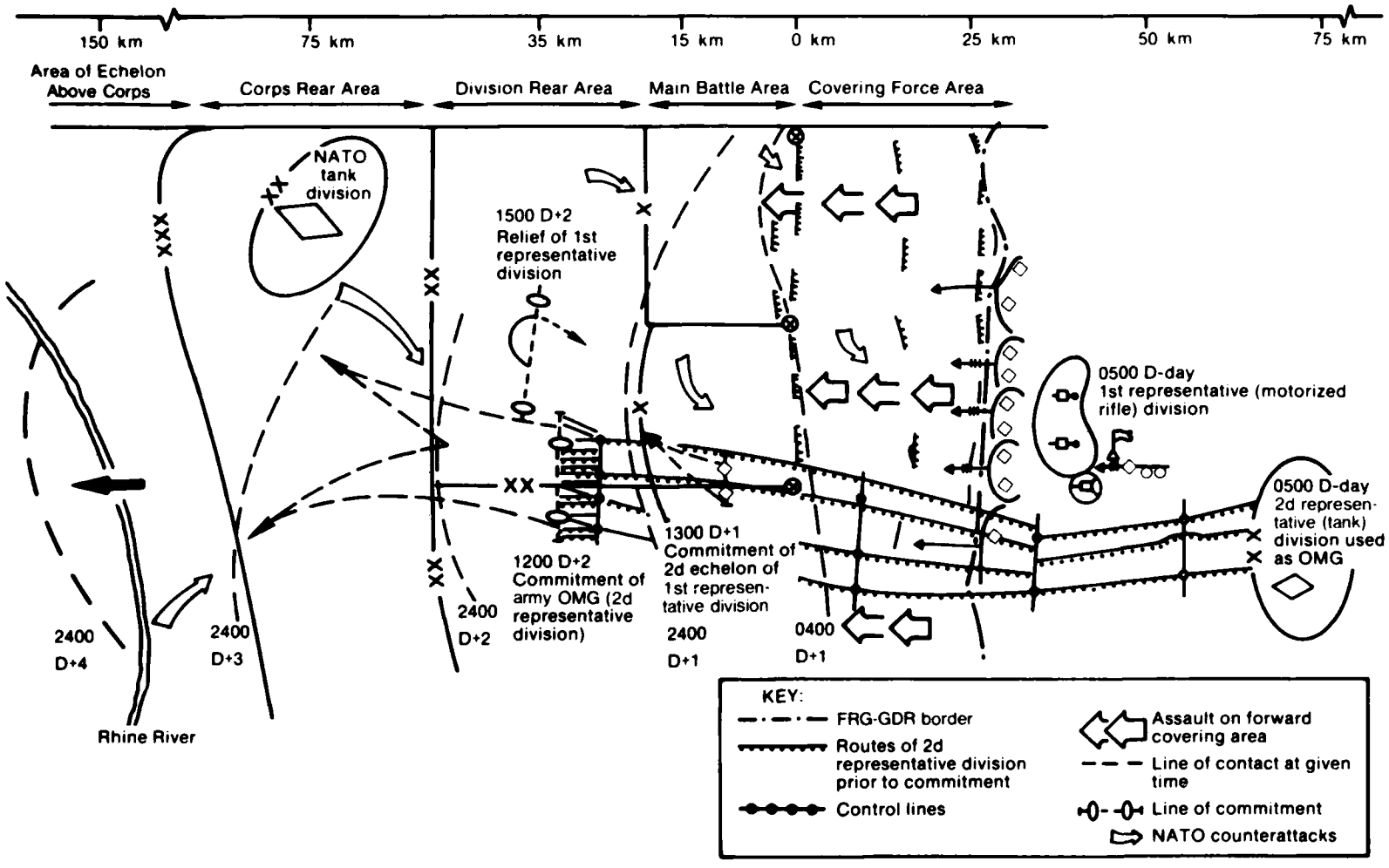


Fig. 15—Movements of first and second representative divisions, D-day to D+4

battalions of first-echelon motorized rifle regiments; about 60 will engage in direct fire (*ogon' pryamoy navodkoy*) in the course of the fire preparation.[5]

D-Day, 0530, to D+1, 0400

The battle to cross the covering force area takes longer than planned. The attackers attribute the slow advance rate to NATO antipersonnel and antitank obstacles, especially remotely delivered mines; active resistance from several NATO fortified positions that survive the fire preparation; and strong air support and artillery fire from deep NATO defense positions.

Nevertheless, by 2000 on D-day, Warsaw Pact forces have seized the entire covering force area. They do not, however, succeed in breaking through the NATO defensive line in the main battle area.

During the night, the division prepares a strong fire strike against NATO defenses in the main battle area. Large quantities of ammunition are delivered, all artillery units move forward, and the battle formation regroups, with two (rather than three) regiments assigned to the divisional first echelon.

Distance advanced: 25 kilometers.

W. Wielemba and Capt. Z. Moszumanski, "Strzelanie z czolgow ogniem posrednim" (Indirect Tank Fire), *Przeglad Wojsk Ladowych*, March 1984, pp. 63-67. Moreover, the article states, T-55 tanks have an indirect fire range of up to 14.6 kilometers. The fire range of the T-72s and T-80s, which have 125-mm caliber guns, can reach nearly 22 kilometers with rocket-aided projectiles. Thus, their range approximates that of 122-mm howitzers. Tanks could therefore participate in fire preparation up to a depth of 15 to 17 kilometers behind the FEBA. In suitable conditions, tanks from the army's second echelon might also participate in the fire preparation. Tanks of the first-echelon regiments might participate in fire preparation initially. Later they would have to move out to their attack departure lines under artillery fire protection. If fire preparation lasted one hour, 150 to 200 tanks of the divisional first echelon alone could fire 13,500 to 18,000 shells in 30 minutes (150 to 200 tanks x 30 minutes x 3 rounds per minute).

[5]All tanks involved in fire preparation use ammunition delivered specially for that purpose. The ammunition is piled beside each tank; as the tanks fire, nearby infantrymen pass the shells up from the ground to the tank crews.

D+1, 0400 to 2400

At 0400, WP forces launch a strong, 90-minute fire preparation against targets throughout the NATO general defense position, including the most important targets in the NATO divisional rear area and corps forward defenses.[6] In the attack sector of the first representative division, the same units that provided fire support prior to the previous day's assault, plus some dual-capability SSM units with conventional warheads, participate in this fire preparation.

The division seizes the main battle area, but again advances more slowly than expected. The attack proceeds as follows:

0530	Assault begins.
1000	Second echelons of lead regiments are committed to battle.
1130	NATO battalion rear is captured.
1300	Regiments of division second echelon are committed to battle.
1745	NATO brigade rear area is captured.
2400	Division accomplishes its subsequent objective.

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[6]According to FM 100-2-1 (p. 9-37), "the fire preparation phase might last *up to 50 minutes*. Because of the mobility of potential targets and the threat of enemy counterbattery fire, the Soviets are striving to increase the intensity and reduce the length of the preparation phase--possibly *to less than 15 minutes*." (Emphasis added.) I disagree with this analysis for several reasons. First, the Soviets cannot substantially increase the intensity of fire because, on average, the rate of fire measured in rounds per minute remains approximately the same as it was in World War II. The firing rates associated with the basic Soviet artillery tube--the 122-mm howitzer--illustrates my point. Of three consecutive models, the M30 (introduced in 1938) fired six rounds per minute; the D30 (1963), seven rounds; and the M74 (1974), five to eight rounds. Only the MRLs have a substantially increased rate of fire. These launchers, however, do not exceed 10 percent of the modern Soviet artillery arsenal. The Soviets might use artillery strikes deep in NATO territory to prepare for attack from the march, when they would be trying to hastily capture NATO intermediate defense positions. In a nonnuclear war, however, if they encountered well-prepared and well-manned defense positions, they would need at least 60 to 90 minutes of fire preparation. Moreover, although artillery fire intensity is primarily a function of the number of guns and rate of fire, it also depends on target acquisition and the effectiveness of projectiles.

The division loses approximately 30 percent of its personnel and equipment; maneuver battalions lose more than 50 percent.

Distance advanced: 15 to 25 kilometers.

D+2

In the early morning hours, the first representative division attacks the NATO divisional rear area.

0500 Division forward detachment is committed on main axis to press attack deeper into NATO rear (an attempt to commit it on D+1 had failed).

0800 During next two hours, division repulses strong NATO counterattack.

1200 Division assists in securing commitment of second representative division.

1500 First representative division is relieved by second-echelon divisions of first-echelon army and assigned to army reserve.

In the first three days, the first representative division loses approximately 45 percent of its personnel and equipment in combat. Several maneuver battalions lose over 70 percent.

Distance advanced: 30 to 40 kilometers (including about 15 kilometers in the army reserve).

D+3 Through D+4

The first representative division remains in the army reserve, consolidating its units, recovering and repairing its combat equipment, and receiving personnel replacements. At 1200 on D+4, the partially reconstituted division begins to move forward, following behind other elements of the first-echelon army.

Distance advanced: 60 kilometers.

SECOND REPRESENTATIVE DIVISION

Scenario Assumptions

The scenario for the second representative division assumes that this tank division has been deployed in an assembly area 60 to 80 kilometers east of the FRG-GDR border since D-9. It attained its wartime manning and equipment levels during the covering maneuvers in which the first representative division also participated.

Combat Mission. On D-3, during the maneuvers, the army commander assigned this division to serve as the army's operational maneuver group. All divisional artillery pieces of 122 mm and above are detached and deployed forward to support the first representative division in the two fire preparations against the NATO covering forces on D-day and against the NATO main defensive positions at the end of the first or beginning of the second day (see Fig. 15, above).

The operational maneuver group (second representative division) has the following combat mission:

- Move forward behind the first representative division on D-day and prepare for commitment in the afternoon.
- Enter the battle on the left wing of the first representative division, which will support the OMG's commitment with all of its firepower; army artillery and aviation will also support the commitment.
- Penetrate the NATO divisional rear area.
- Combat the approaching NATO divisional reserves.
- Destroy and possibly seize important military objectives, e.g., nuclear storage sites, command posts, air defense sites, and possibly airfields.
- In coordination with an army heliborne assault landing (desant), capture key choke bridges and terrain to prepare the way for commitment of the army's second-echelon divisions.
- Continue the assault in the enemy corps rear area in concert with other elements of the army's second echelon.

Reinforcement and Support. The OMG will have the following operationally subordinated reinforcements (*pridannyye sily i sredstva*):

- One regiment of transport helicopters (Mi-8 *Hip* and Mi-6 *Hook*)
- One regiment of attack helicopters (Mi-24 *Hind* and Mi-28 *Havoc*)
- One brigade of BM-27 MRLs from the artillery reserve of the Supreme High Command (beginning at 0500 on D+1)
- One regiment of SP 152-mm guns (2S-5) from the front's artillery
- One surface-to-air missile regiment from the front's air defense brigade.

Supporting units (*podderzhivayushchiye sily i sredstva*) during the initial commitment will include

- Most of the army artillery group
- Most of the artillery of the first representative division
- One fighter-bomber division with a limit of 100 sorties
- One interceptor air division, with one regiment on airborne alert.

To operate in the NATO rear during the first day of commitment, the OMG will have the support of

- One heliborne assault brigade
- One on-call ground attack fighter division capable of 200 sorties per day
- One engineer river-crossing battalion
- One engineer pontoon battalion.

D-Day

The OMG is dispersed in battalion-size formations in its departure area, 60 to 80 kilometers east of the FRG-GDR border. Its divisional artillery and the regimental 122-mm howitzer battalions have already moved up to within a few kilometers of the border to take part in fire preparation against the NATO covering force.

As the first representative division fights its way across the CFA, the OMG pulls out of its assembly area. It moves forward in battalion columns along three or four parallel routes; its lead elements approach to within 25 to 30 kilometers behind the second-echelon regiments of the first representative division. The OMG's remaining artillery moves with its first-echelon regiments immediately behind the lead units.

Distance advanced: 60 to 80 kilometers.

D+1

Between 0400 and 0530, the divisional artillery supports the army first echelon in the fire preparation against NATO's main defense positions. Then, deployed in prebattle formation, it leapfrogs forward, behind the first representative division. At 1800, the detached artillery units rejoin the OMG, taking their appointed places in the divisional prebattle formation. Several NATO air attacks on divisional march columns result in heavy losses.

Distance advanced: 20 to 25 kilometers, thanks to favorable terrain.

D+2

At 1200, the OMG is committed to action on the line shown in Fig. 15, above. Taking advantage of the strong fire support and the action of the heliborne assault brigade, its own tactical heliborne drops, and the operations of its forward detachments, the OMG reaches the rear area of the enemy first-echelon division by 2400 on D+2. Combat losses average 10 percent overall, 20 percent in maneuver battalions, and 25 percent in helicopter and heliborne units.

Distance advanced: 20 to 35 kilometers.

D+3

In the morning, the OMG first echelon and forward detachments capture a line of hills. Their position enables the army to commit another reinforced tank division from its second echelon. The second-echelon division joins the battle on the first-echelon division's right flank. Thanks to these new forces and the success of front heliborne

and airborne desants, the OMG advances, capturing assigned objectives and repulsing enemy counterattacks.

The division's combat losses since the beginning of hostilities average 18 percent, with 35 percent in maneuver battalions and 40 percent in heliborne and helicopter units. Ammunition is dwindling.

Distance advanced: 35 to 40 kilometers.

D+4

The OMG starts to pursue the NATO forces in the early morning, meeting them in a few engagements during the day. At 1200, the OMG's forward detachment, working with a front-level airborne desant group, captures an undamaged bridge over the Rhine River. By 2400, the OMG secures its position on the western bank of the Rhine, around the captured bridge. In other fighting, OMG units capture and hold some operationally important objectives.

Total losses average 25 percent, with over 50 percent in maneuver battalions, and more than 60 percent in helicopter and heliborne units. Ammunition and petroleum, oil, and lubricants (POL) continue in short supply. Some units are down to emergency stocks.[7]

Distance advanced: 50 to 70 kilometers.

THIRD REPRESENTATIVE DIVISION

Scenario Assumptions

The third representative division is part of a second-echelon tank army in the first strategic echelon. The tank army, composed solely of forces from the Group of Soviet Forces, Germany, and garrisoned in Dresden, is preparing for commitment to battle on the front's main axis between D+1 and D+3.

The front headquarters organizes the movement of forces to the battlefield. It also arranges air defense and antiairborne defense during the long-distance march. Finally, it allocates a regiment of tank-transport trailers to each of the tank army's three first-echelon

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[7]Emergency ammunition stocks are fixed in fire units; for example, 0.1 fire units are allotted for each kind of weapon. The emergency stocks may be used only with the specific permission of a higher authority. Food, POL, and other supplies are also stocked for emergencies.

divisions. During the first 24 hours of march (0900 on D-day to 0900 on D+1), the three transport regiments will move tanks and tracked surface-to-surface and surface-to-air missile launchers to the intermediate assembly area, 150 kilometers behind the line of contact.

The scenario envisages no enemy ground attacks in the period preceding the division's commitment to combat. Departures from established rates of advance in this example stem from heavy traffic, bottlenecks at various sectors of the march route, and other such factors.

Figure 16 depicts the movements of the third representative division from D-day to D+4. In the account that follows, the paragraph numbers and times are keyed to the time-period numbers in Fig. 16.

1. D-Day, 0500-0700: At Alert Assembly Areas

At H-hour (0500 on D-day), all units and subunits are dispersed, partly entrenched and hidden, in their alert assembly areas, awaiting assignment.[8]

2. D-Day, 0700-1200: Initial March

Units move from alert assembly areas to divisional departure area.[9] The columns of tracked vehicles depart from the alert assembly areas first; the vehicles will be loaded on trailers in the divisional departure area.

Distance advanced: 5 to 30 kilometers.

3. D-Day, 0900-1200: At Divisional Departure Area

Columns are divided into trailer, wheeled, and tracked types. The trailer column, which includes the division's 325 tanks, all tracked SSM launchers, and some SAM launchers--a total of approximately 400 vehicles--departs first. One unit of tank transport trailers is provided to carry these vehicles. After they have gone, the column of wheeled vehicles and the column of tracked vehicles leave simultaneously, each taking a different route.

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[8]Appendix C describes Soviet alert assembly areas in detail.
[9]See "Marches" and "Assembly and Departure Areas" in Sec. V, above.

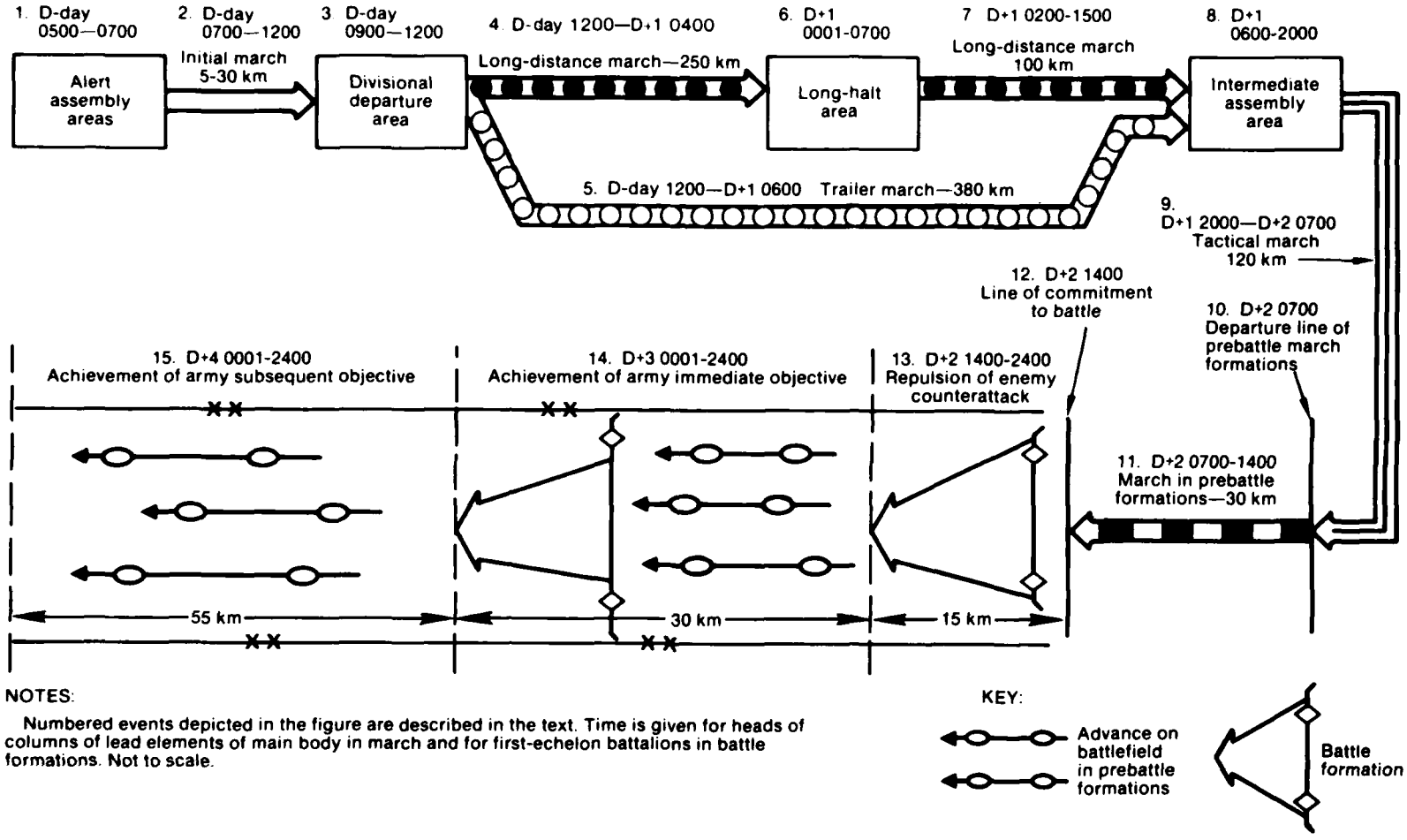

Fig. 16—Movements of third representative division, D-day to D+4

4. D-Day, 1200, to D+1, 0400: Long-Distance March

The column of wheeled vehicles, halting 20 to 30 minutes every 2 to 3 hours, moves from the divisional departure area to the long-halt area in 12 hours, advancing at an average rate of about 20 kilometers per hour. The tracked vehicle column takes 16 hours, at approximately 16 kilometers per hour, to reach the long-halt area.

Distance advanced: 250 kilometers.

5. D-Day, 1200, to D+1, 0600: Trailer March

After leaving the divisional departure area, the column of trailer-transported vehicles heads directly for the intermediate assembly area. Halting for 10 to 20 minutes every 3 to 4 hours, the column travels for 18 hours, at an average advance rate of 21 kilometers per hour. The first trailers arrive at the intermediate assembly area at around 0600 on D+1.

Distance advanced: 380 kilometers.

6. D+1, 0001-0700: Long Halt

The wheeled-vehicle column reaches the long-halt area before the tracked-vehicle column. During the 2 to 3 hours in the long-halt area, the troops eat a hot meal, check their equipment, and refuel and service their vehicles. Within an hour of their leaving, the main body of the tracked-vehicle column arrives at the long-halt area.

7. D+1, 0200-1500: Long-Distance March

Another long-distance march, averaging 17 kilometers per hour, takes the column of wheeled vehicles from the long-halt area to the intermediate assembly area. The column of tracked vehicles covers the distance at the rate of 13 kilometers per hour. The columns move more slowly, on average, than they did in the previous march (time period 4) because the traffic increases as they near the battlefield.

Distance advanced: 100 kilometers.

8. D+1, 0600-2000: At Intermediate Assembly Area

The leading units of the various formations reach the intermediate assembly area in the following order: the trailer column at 0600; the

wheeled column at 0900; and the tracked column at 1130. The divisional helicopter subunits carrying (1) the divisional forward command post and (2) traffic control, signal, and engineering subunits have already arrived. The helicopters had flown nonstop from their peacetime alert assembly areas to the intermediate area between 1300 and 1500 on D-day.

The following activities take place in the intermediate assembly area:

- Organizational units and subunits reunite. Tanks brought in on trailers rejoin their regiments; organic tracked and wheeled vehicles that completed the march by other routes and means return to their battalions and companies.
- Vehicles are refueled and serviced.
- Weapons are serviced and loaded; only antiaircraft guns were loaded during the earlier marches.
- Troops eat a hot meal.
- Combat tasks are issued for the upcoming tactical march.
- March columns regroup and form for the tactical march.

Because these functions consume considerable time, the last subunits do not leave the intermediate assembly area until between 2400 on D+1 and 0200 on D+2.

9. D+1, 2000, to D+2, 0700: Tactical March

From the intermediate assembly area, the division marches in columns along 3 separate, parallel routes, approximately 5 to 7 kilometers apart, in a march sector 15 to 30 kilometers wide, depending on the prevailing conditions. Each regiment and battalion is prepared to deploy into prebattle formation at a moment's notice, with no further regrouping. Every 3 to 4 hours, the march halts for up to 1 hour. The division commander is responsible for defense against enemy aircraft, airborne units, and special forces units. The division advances to the departure line at an average rate of 11 kilometers per hour.

Distance advanced: 120 kilometers.

10. D+2, 0700: At Departure Line

At the departure line, the parallel march columns begin to spread out and deploy into prebattle march formations.[10]

11. D+2, 0700-1400: March in Prebattle Formations

The division marches from the departure line in a sector 20 to 30 kilometers wide. It no longer moves in continuous march; instead, units leapfrog each other from point to point. The rate of advance depends on the success of the attacking first echelon in combat with the enemy.

The division covers the first 15 kilometers of this sector in regimental prebattle formations (as shown in Fig. 10, above). At a distance of 10 kilometers from the line of commitment to battle, the regiments divide into battalion prebattle formations, which in turn subdivide into company prebattle formations. The divisional artillery group deploys from the march and participates in the fire preparation upon the commitment of its division to action. The units advance at an average rate of 4.2 kilometers per hour.

Distance advanced: 30 kilometers.

12. D+2, 1400: At Line of Commitment to Battle

Under the cover of short but powerful fire preparation by ground-attack aircraft, helicopters, gunships, and artillery, the first-echelon units of the third representative division join the battle in the area where the first-echelon forces have been fighting up to this point.

13. D+2, 1400-2400: Repulsion of Enemy Counterattack

The division's lead regiments encounter a strong enemy counterattack on the division's flank, at a depth of about 5 kilometers. After ten hours of fighting to repulse this counterattack, the lead regiments resume an organized advance and move ahead at a rate of 1.5 kilometers per hour.

Distance advanced: 15 kilometers.

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[10]See "Marches," Sec. V, above, and "Prebattle Formation," FM 100-2-1, pp. 5-11 to 5-12.

14. D+3, 0001-2400: Achievement of Immediate Objective

During 24 hours of fighting, the division overcomes enemy resistance on successive defense lines and penetrates to a depth of 30 kilometers, at an average advance rate of 1.25 kilometers per hour. The advance achieves the army's immediate objective.

Distance advanced: 30 kilometers.

15. D+4, 0001-2400: Achievement of Subsequent Objective

The division brings its second echelon into action at dawn on D+4. By the end of the day, it achieves its subsequent objective, advancing at an average rate of 2.3 kilometers per hour.

Distance advanced: 55 kilometers.

FOURTH REPRESENTATIVE DIVISION

Scenario Assumptions

A Guards tank division of a Guards tank army (headquartered in Borisov) serves as the model for the fourth representative division. The army will function as a lead element of a second-echelon tank front, which is part of the first strategic echelon. Between D-day and D+5, the division will travel some 1500 kilometers from its peacetime garrisons in the area of Lepel', Belorussian MD, to an assembly area in Peine, West Germany.[11] It will depend largely on railroads and trailers to move its personnel and equipment across Belorussia, Poland, and East Germany.[12] Figure 17 shows the route of the fourth representative division as it deploys to the battle area.

Rail transport for the division requires three railroad stations and six entraining points. The division splits into 36 troop train units, as shown in Fig. 18 and Table 25. The average train takes three hours to load. The first train departs at 0600 on D+1. The remaining 35 trains follow at 30-minute intervals.

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[11]The Soviet army describes all areas in terms of three geographic points, for example, Hanover-Celle-Peine, in this case. For the sake of simplicity, only one is used here.

[12]See the discussion of railroad and trailer transport in Sec. V, above.

Figure 19 depicts the deployment to the battle area of the fourth representative division between D-day and D+5. In the account that follows, the paragraph numbers and times (GMT + one hour) are keyed to the time-period numbers in Fig. 19.

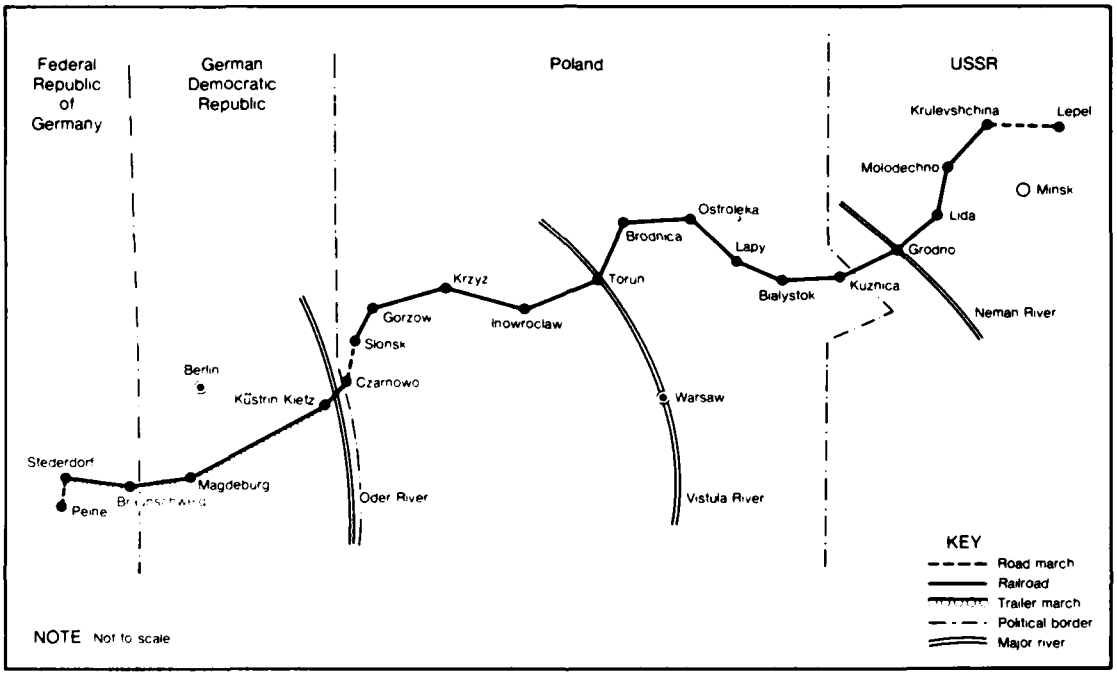
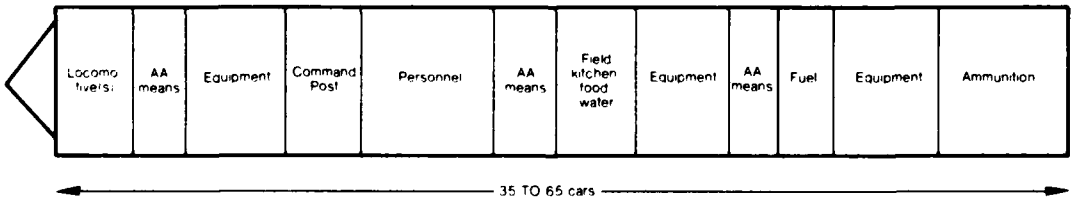


Fig. 17—Route of fourth representative division deploying to battle area, D-day to D+5



SOURCE Based on V.G. Reznichenko *Taktika* (Tactics) Voyenizdat Moscow 1984 pp 252–253

Fig. 18—Diagram of troop train unit of fourth representative division

Table 25

COMPOSITION OF TROOP TRAIN UNITS OF FOURTH REPRESENTATIVE DIVISION

Sequence of Troop Train Units	Basic Unit Transported	Reinforcement and Attached Subunits
1	Reconnaissance battalion (+)[a]	Chemical; traffic control; engineer; antiaircraft
2	Signal battalion (-)[a]	Engineer; AA
3	Main command post group (div hq; hq service subunits)	Traffic control; signal; AA; engineer
4	Engineer battalion (-)	AA; helicopter unit;[b] chemical bn (-)
	First tank regiment	
5	Regimental hq	Recce; traffic control; AA; engr; signal; chemical
6 to 8	Three tank battalions (+)	Each with motorized rifle; AA; engineer; artillery
9	Regimental rear services	AA
10 to 14	Second tank regiment (same as first tank regt)	(Same as first tank regt)
15 to 19	Third tank regiment (same as first tank regt)	(Same as first tank regt)
	Motorized rifle (MR) regt	
20	Regimental hq	Recce; traffic control; AA; engr; signal; chemical
21	Tank battalion (+)	Artillery bn; AA
22 to 24	Three MR battalions (+)	Each with AA; engr
25	Regimental rear services	AA
	Artillery regiment	
26	Regimental hq (and hq service subunits)	Target acquisition battery; 152-mm howitzer bn
27	Two 122-mm howitzer bns	AA
28	Regimental rear services	AA
29	Divisional Frog and MRL bns	AA
30 to 36	Divisional rear services	AA

[a]A plus sign (+) means that the unit or subunit has been reinforced; a minus sign (-) indicates that some troops have been detached.

[b]Only ground support services of the helicopter unit; helicopter airborne wave regroups in air.

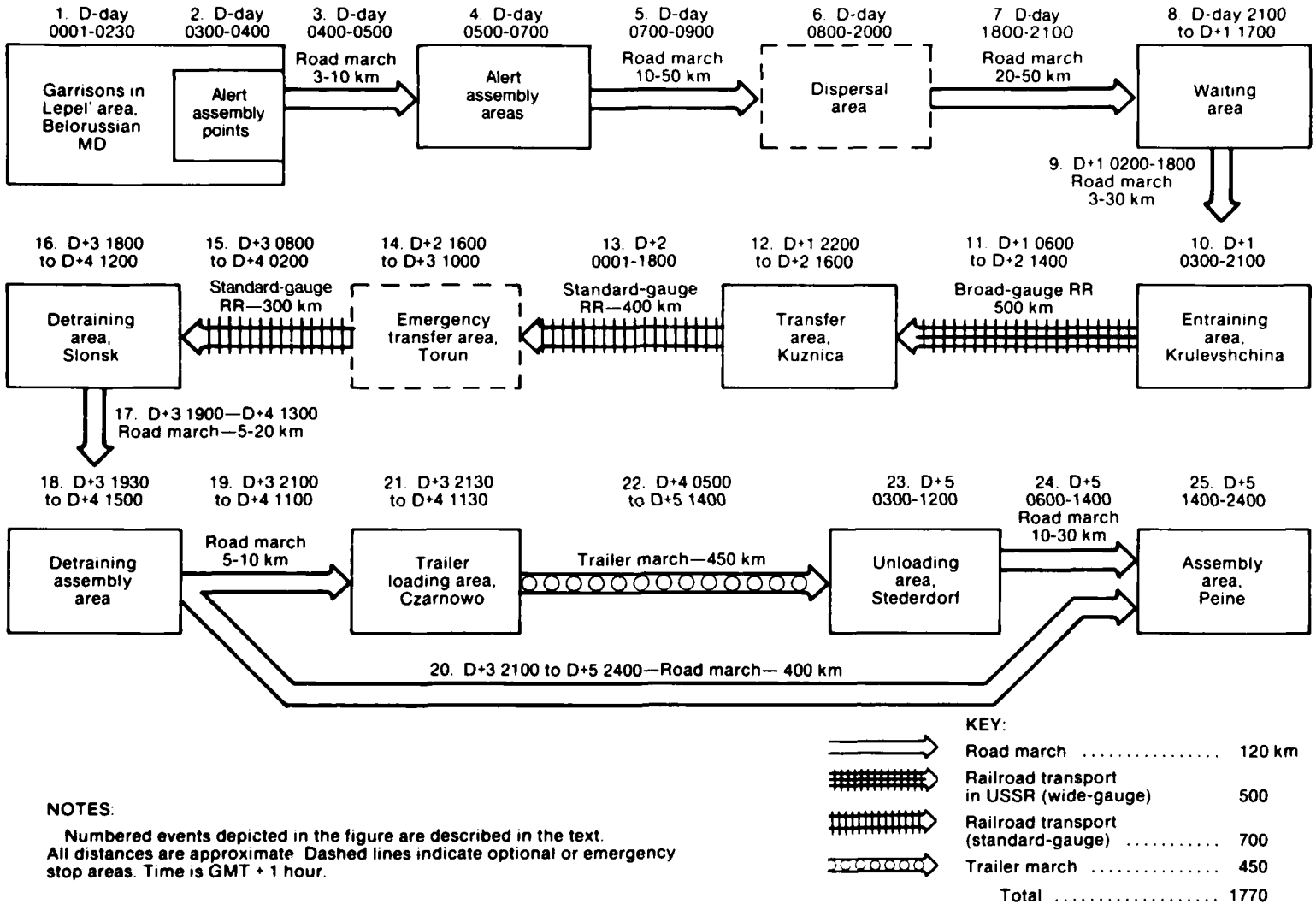


Fig. 19—Movements of fourth representative division, D-day to D+5

1. D-Day, 0001-0230: At Garrisons

After ten days of mobilization, the fourth representative division waits at its garrisons in the Lepel' area, ready to depart. It has received entrainment orders, and under staff command the troops have planned and rehearsed loading and other tasks. A higher command orders the division to alert readiness by 0230 D-day.

2. D-Day, 0300-0400: At Alert Assembly Points

Combat alert is ordered at 0300. Subunits gather at their alert assembly points.

3. D-Day, 0400-0500: Road March

Subunits depart successively from alert assembly points and march to previously designated alert assembly areas.

Distance advanced: 3 to 10 kilometers.

4. D-Day, 0500-0700: At Alert Assembly Areas

At H-hour, all units and subunits are dispersed, partly entrenched and hidden, in their alert assembly areas, awaiting assignment.

5. D-Day, 0700-0900: Road March

Units and subunits march from their alert assembly areas to the dispersal area.

Distance advanced: 10 to 50 kilometers.

6. D-Day, 0800-2000: At Dispersal Area

To save time, divisional units may avoid the dispersal area and move directly from alert assembly areas to the waiting area. In this instance, however, the commander in chief of the Western TVD has not yet decided the deployment of the tank army to which the fourth representative division belongs, pending the outcome of the offensive that had begun at 0500. The fourth representative division remains in the dispersal area until the commander in chief makes the decision at 1700 on D-day; at 1720, the division headquarters receives orders for units to move out.

7. D-Day, 1800-2100: Road March

Units march from the dispersal area to the waiting area.

Distance advanced: 20 to 50 kilometers.

8. D-Day, 2100, to D+1, 1700: At Waiting Area

Divisional units occupy the waiting area, as planned before leaving the dispersal area. The division splits into 36 troop train units (see Fig. 18 and Table 25, above) and deploys in the waiting area along three routes, each leading to an entraining station. Troop train units are positioned along the three routes in order of embarkation.

9. D+1, 0200-1800: Road March

Units march from the waiting to the entraining area.

Distance advanced: 3 to 30 kilometers.

10. D+1, 0300-2100: Entraining Area

The entraining area at Krulevshchina is divided into three entraining stations, which are divided into two entraining points each. Successive troop train units embark at each entraining point, taking about 3 hours to load each train. The division is loaded in about 18 hours. The first train leaves Krulevshchina at 0600 on D+1; the last at 2100 on D+1. Intervals between trains average 30 minutes.

11. D+1, 0600, to D+2, 1400: Movement by Railroad

The troop trains travel from Krulevshchina to the transfer (*peregruzka*) area in Kuznica (Poland) on one track of a Soviet wide-gauge railroad line at an average speed of 31.25 kilometers per hour.

Distance advanced: 500 kilometers.

12. D+1, 2200, to D+2, 1600: At Transfer Area

After crossing the Polish-Soviet frontier past Grodno, the trains carrying the division stop at Kuznica to transfer from Soviet-gauge to European-gauge track. The process of switching undercarriages takes 2 hours per train. (Where wide-gauge tracks already exist--for example, L'vov-Krakow-Katowice-Wroclaw-GDR--transfer areas are not needed.)

13. D+2, 0001 to 1800: Movement by Railroad

The trains travel 400 kilometers out of Kuznica in 16 hours without hindrance from the enemy. Because this area is more developed (junctions, level crossings, etc.) than that between Krulevshchina and Kuznica, average speed drops to 25 kilometers per hour. On reaching Torun, however, the troops find that conventionally armed NATO fighter-bombers have completely destroyed the railroad bridge across the Vistula River near Torun at 0600 on D+1. The fighter-bombers attack again between 1200 on D+1 and 1300 on D+2 to prevent the reconstruction of the bridge. They also destroy the road bridge.

Distance advanced: 400 kilometers.

14. D+2, 1600, to D+3, 1000: At Emergency Transfer Area

The incoming trains of the fourth representative division are forced to stop and off-load; the vehicles cross the Vistula on ferries, pontoon bridges, and other improvised platforms. The commander of the local Polish internal front forces organizes the crossing, using local engineering troops and equipment. The forces and equipment of the fourth representative division therefore do not have to participate in the preparations. After crossing the river, the division reloads onto trains. The unloading, crossing, and reloading take an average of 16 hours per troop train unit.

(Conventional rocket and air strikes and other attacks and accidents, mainly at railway bridges, tunnels, and other choke points, may force divisional units into additional transfer areas on the way to the battlefront. This route has many such vulnerable spots. The division might therefore take alternative measures. After crossing the river, tracked vehicles--tanks, SP guns, etc.--could be loaded on trailers and moved by road to the newly assigned assembly area, while the remaining wheeled vehicles made their own way.)

Distance advanced: 5 to 20 kilometers, in emergency transfer area.

15. D+3, 0800, to D+4, 0200: Movement by Railroad

This final segment of railroad transport from Torun to the detraining area in Slonsk is covered in 10 hours at 30 kilometers per hour, without enemy attack.

Distance advanced: 300 kilometers.

16. D+3, 1800, to D+4, 1200: At Detraining Area

The detraining area is located at Slonsk, on the east bank of the Oder River. NATO air attacks between 1000 on D-day and 0700 on D+1 have destroyed all peacetime bridges in the area. Polish and East German internal front troops replace the bombed-out bridges with makeshift ferries and pontoon bridges.

The detraining area contains several detraining stations, each of which has several detraining points. Each train unloads in 3 to 4 hours. The division's 36 trains take a total of 21 hours to unload.

17. D+3, 1900, to D+4, 1300: Road March

Divisional units proceed from the detraining area at Slonsk to their detraining assembly area in the order in which the carriages are unloaded.

Distance advanced: 5 to 20 kilometers.

18. D+3, 1930, to D+4, 1500: At Detraining Assembly Area

As they arrive at the assembly area, tracked vehicles are separated from wheeled vehicles, and vehicles and equipment are reunited with their regiments. Units with tracked vehicles then proceed to the trailer loading area. All other regiments and independent battalions form march columns and, following two different routes, head directly for the new assembly area in West Germany.

19. D+3, 2100, to D+4, 1100: Road March

Tracked vehicles move from the detraining assembly area to the trailer loading area at Czarnowo.

Distance advanced: 5 to 10 kilometers.

20. D+3, 2100, to D+5, 2400: Road March

Nontracked vehicles move from the detraining assembly area to a new assembly area in Peine.

Distance advanced: 400 kilometers.[13]

21. D+3, 2130, to D+4, 1130: At Trailer Loading Area

At Czarnowo, the tracked vehicles are loaded on trailer trucks and the units depart for the battle area.

22. D+4, 0500, to D+5, 1400: Trailer March

The trailers move from the loading area at Czarnowo to the unloading area at Stederdorf, West Germany. Each trailer has two drivers who alternate driving. Fuel tankers accompany the march columns to eliminate the need for refueling stops. Enemy air strikes on important road junctions en route slow the way, however, and the trailers make the march in 24 hours, at a rate of only 18.75 kilometers per hour.

Distance advanced: 450 kilometers.

23. D+5, 0300-1200: At Unloading Area

The trailers unload at Stederdorf because the roads to the assembly area at Peine cannot accommodate the loaded trailers and the unloading of tanks.

24. D+5, 0600-1400: Road March

The tracked vehicles move from Stederdorf to the assembly area at Peine.

Distance advanced: 10 to 30 kilometers.

25. D+5, 1400-2400: New Rear Assembly Area

All divisional units arrive at the new assembly area in Peine in the course of 12 hours. They have marched from the deep rear in Belorussia to the combat area in West Germany.

Total distance advanced: 1770 kilometers.

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[13]This scenario follows only the movements of the tracked vehicles.

Appendix A

SOVIET WORLD WAR II NORMS AS INDICATORS OF FORCE DENSITIES IN CONTEMPORARY CONVENTIONAL CONFLICT

The Soviet strategic, operational, and tactical norms followed during World War II, in my view, provide a useful guide to likely force densities in a modern nonnuclear conflict. However, one must also take note of the many ways in which a conflict today would differ from the World War II experience.

First, the width and the depth of the tactical combat zone has increased radically. Today, a Soviet division's attack sector is wider and deeper than that of a Soviet combined-arms or tank army in World War II. Despite the fact that a contemporary division's firepower is much greater than that of its predecessor, this expanded attack sector has produced a notable decrease in the force density per square kilometer.

Second, the nature of the World War II defense on the European eastern front differed from that of today. Then, a system of constant, deeply entrenched positions and belts predominated. Today, we find separate defensive strongholds distributed over a relatively wider and much deeper area.

Third, the contemporary Soviet army as a whole has less artillery but more tanks than it had in World War II. Maneuver divisions have approximately the same number of organic artillery tubes as they did then. The number of tubes per motorized-rifle division has fallen slightly, from 210 to 204; a tank division has 180.

Today, the Soviets no longer have corps-level artillery, and front- and army-level artillery is relatively small. Most important, the number of artillery units assigned to the reserve of the Supreme High Command, which constituted nearly half of the entire Soviet artillery park in World War II, has been significantly reduced.

An infantry division operating along the main axes of attack in World War II had a ratio of one organic to two or three attached and supporting artillery tubes. Presently, this ratio is more likely to be on the order of 1:1 and in many cases may fall to 3:2 or 2:1. At the

same time, the potential effectiveness of artillery fire has vastly improved, thanks to the increased size of the tubes and thus of the shells, as well as improvements in range and in target acquisition. The rate of fire, however, remains largely the same.[1]

In a future war, the Soviets would field considerably fewer tubes per kilometer in individual divisional attack sectors. The days when they had 200 to 300 guns per kilometer of breakthrough sector are gone forever, despite the fact that these figures are still quoted in Soviet military literature. Currently, 100 tubes per kilometer of breakthrough sector on the main axis would likely represent the maximum density; the normal density would fall far below that.

The main method of fire support in the contemporary offensive fought with conventional weapons would be successive fire concentrations, rather than the rolling barrages that were employed during World War II. The densities of tanks, aircraft, and other equipment applied by the Soviets at that time *cannot* be treated as indicators of likely deployments under contemporary conditions.

The Soviet experience in World War II can, however, prove useful as an indicator of the general principles that the Soviets would likely follow in the conduct of warfare, such as economy of force or concentration of combat power at the decisive time and place. In this vein, the most important operational and tactical norms that the Soviet high command used in a classical World War II strategic operation in the western Ukraine merits examination. In modern strategic operations, the Soviets would doubtless apply the same sharp differences in frontages, strength, and densities characteristic of this operation.

In March-April 1944, a group of five Soviet fronts--the Second Belorussian and the First, Second, Third, and Fourth Ukrainian--fought two German army groups--A and South--on the west bank of the Dnepr River.[2] The offensive frontages, strength, and various equipment

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[1]See discussion of fire preparation in Sec. VI, above ("First Representative Division," "D-Day, 0500 to 0530").

[2]Among the best and most exhaustive descriptions and analyses of this strategic operation may be found in Professor John Erickson's famous work, *The Road to Berlin*, George Weidenfeld and Nicolson, London, 1983, pp. 175-180. The most important Soviet sources include A. N. Grylev, *Za Dneprom* (Across the Dnepr), Voyennoye Izdatel'stvo, Moscow, 1963, and *Dnepr-Karpaty-Krym* (Dnepr-Carpathians-Crimea), Nauka, Moscow,

Table A.1

OPERATIONAL AND STRATEGIC DENSITY OF SOVIET FRONTS IN UKRAINE: STRATEGIC OPERATION OF MARCH 3, 1944

Front	No. & Type of Armies			Offensive Zone (km)	Average Frontage of Combined-Arms Armies (km)
	Air	Tank	Combined Arms		
Second Belorussian	1	0	3	180	60.0
First Ukrainian	1	2	6	405	67.5
Second Ukrainian	1	3	7	311	44.4
Third Ukrainian	1	0	3	152	50.6
Fourth Ukrainian	1	0	5	450	90.0
Total	1	5	24	1498	312.5
Average					62.5

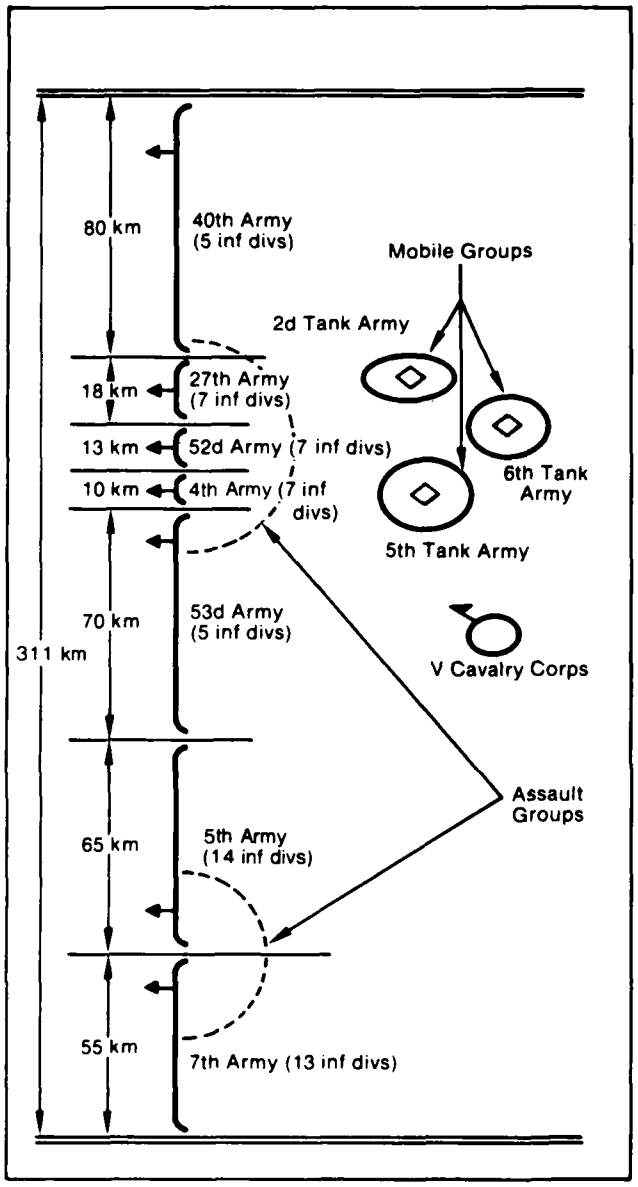
SOURCE: *Istoriya vtoroy mirovoy voyny* (History of the Second World War), Voyennoye Izdatel'stvo, Moscow, Vol. 8, 1977, pp. 80-83.

densities of the five Soviet fronts are shown in Table A.1. The main offensive thrust was concentrated in the zone of the Second Ukrainian Front, whose frontages and operational density are set forth in Fig. A.1. The data in Table A.1 and Fig. A.1 are combined in Fig. A.2 to give a picture of the various combat asymmetries. The Soviets consistently sought such asymmetries, particularly the disparity in proportions shown in Fig. A.2.

The Soviets were and remain firm believers in two important Clausewitzian principles of military art: the principle of mass and the principle of economy of force. The principle of mass calls for the concentration of combat power at a decisive place and time. The principle of economy of force entails the allocation of the minimum required combat power to secondary efforts.

1967; I. S. Konev, *Zapiski Komanduyushchego frontom 1943-45 gg.* (Notes of a Front Commander, 1943-45), Voyenizdat, Moscow, 1981; *Istoriya vtoroy mirovoy voyny* (History of the Second World War), Vol. 8, Voyenizdat, Moscow, 1977, pp. 133-137; I. Yakubovskiy, "Na proskurovsko-chernigovskom napravlenii," *Voyenno-istoricheskiy zhurnal*, No. 4, 1969, pp. 18-29.

Frontage



Operational Density

Combined-Arms Army		Frontage per Infantry Division (km)
27th	.....	2.57
52d	.....	1.85
4th	.....	1.42
Average	.....	1.94
40th	.....	20.00
53d	.....	14.00
5th	.....	4.64
7th	.....	4.23

SOURCE: Adapted from *Mala Encyklopedia Wojskowa*, 3 vols., MON, Warsaw, Vol. 3, 1971, p. 370.

Fig. A.1—Force densities on 2d Ukrainian front, March 3, 1944

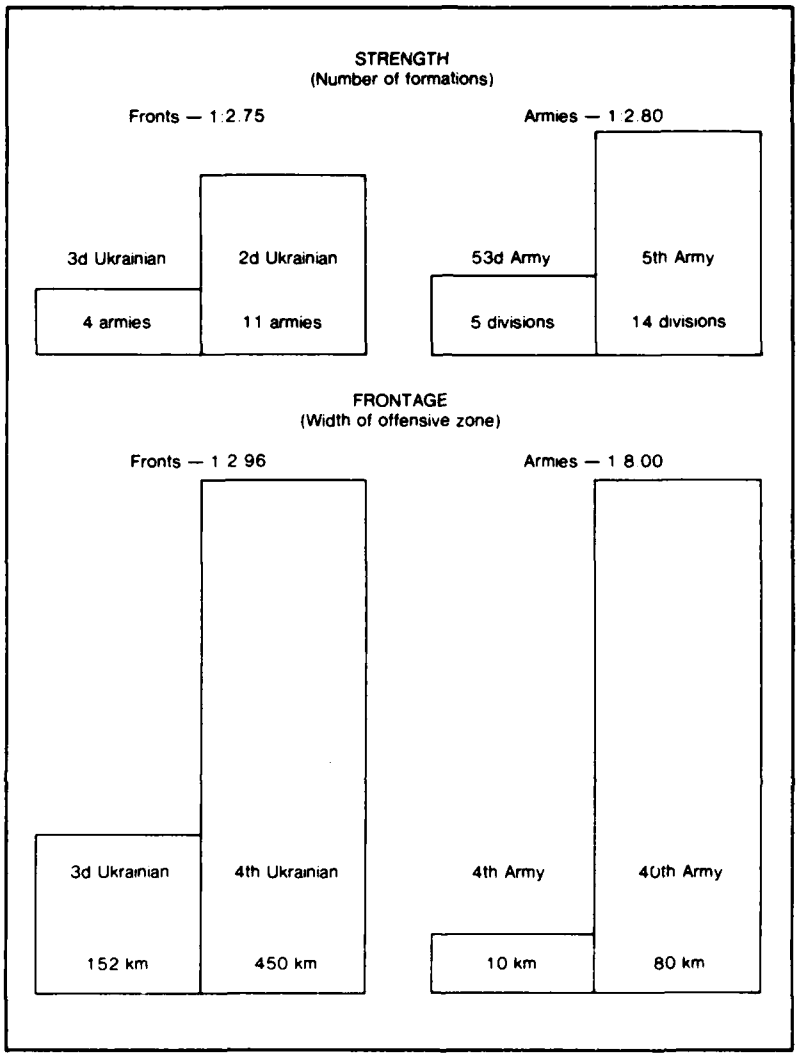


Fig. A.2—Asymmetries in combat strength and frontages in Ukraine in strategic operation begun March 4, 1944

In the case of the Second Ukrainian Front (see Table A.1 and Fig. A.1), more than half of the armies (six of eleven, including all three tank armies) were concentrated on the 41-kilometer-wide decisive axis of thrust, which constituted only 13 percent of the front's 311-kilometer-wide offensive sector. This concentration enabled the

Soviets to achieve a density of slightly more than one division every 2 kilometers. On the adjacent secondary direction (the sector of the 40th Army), the density was only one division every 16 kilometers.

The Soviets would most likely repeat this pattern of asymmetric force deployment in a war against NATO. That is, they would spread their forces unevenly among and within fronts across and within the Western TVD, massing forces in breakthrough sectors along main axes of attack and covering secondary axes much more sparsely.

This likely pattern is reflected in modern Soviet military art, which combines the two Clausewitzian principles of mass and economy of force, mentioned above, into the principle of concentration (*massirovanie sil i sredstv*).[3] Obviously, in a conventional war, which might turn nuclear at any moment, the principle of concentration would be modified. Densities in breakthrough sectors would be much lower than those employed in the past, and the breakthrough zones would be wider than in the prenuclear period. Nevertheless, the Soviets will continue to rely on asymmetries in force density, reflecting the principle of concentration.

Soviet deployments, offensive frontages, and the composition of major field forces would probably not display the symmetry often ascribed to them in Western publications. With regard to force composition, it is highly unlikely that all Soviet tank armies would consist uniformly of three tank divisions and one motorized rifle division;[4] or that all combined-arms armies would have three motorized rifle divisions and one tank division; or that all fronts would contain two combined-arms armies and one tank army,[5] or three combined-arms armies and one tank army.[6]

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[3]See, for example, *SVE*, Vol. 6, pp. 542-543; Vol. 5, pp. 179-180; General Donn A. Starry, U.S. Army, "The Principles of War," *Military Review*, September 1981, pp. 2-12.

[4]As suggested by Brigadier John Hemsley, *Soviet Troop Control*, Brassey's Publishers, Oxford and New York, 1982, p. 122.

[5]As suggested by Viktor Suvorov, *Inside the Soviet Army*, Hamish Hamilton, London, 1982, p. 129. He was referring specifically to the Western TVD.

[6]As noted in U.S. Department of Defense, Defense Intelligence Agency, *Handbook on Soviet Armed Forces*, DDB-2680-40-78, Washington, D.C., 1978, p. 8-6.

We should remember that in the forces of the Soviet Union and the Warsaw Pact nations, the division or independent brigade represents the highest level of the permanent fixed TO&E. All formations above division would have varied compositions tailored to their specific role:

- A combined-arms army would contain three to seven divisions, of which one to three would be tank divisions.
- A tank army would have two to six divisions, including two to five tank divisions and one to three motorized rifle divisions.
- A front air army would have two to five air divisions and independent air regiments. The same would apply to air armies at levels above the front; these armies would include units of medium and intermediate bombers from strategic aviation, as well as tactical fighter-bombers and fighter-interceptors.
- A front would consist of two to six combined-arms and tank armies, including one to four tank armies[7] and one air army.

The Soviet High Command would continue to change the force composition after hostilities broke out. Some formations would be reinforced, while others would lose strength as operations unfolded. These variations would peak during the latter days of the strategic offensive, when, as a result of the dynamic changes on the battlefield, divisions and armies would be frequently reassigned.

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[7]In contrast to the situation in World War II, when the proportion of combined-arms armies to tank armies was 7:1, today the Soviets have, especially in Central Europe, a ratio of approximately 1:1.

Appendix B

POSSIBILITIES FOR A MANCHURIAN-TYPE BLITZKRIEG IN EUROPE

The Soviets probably could not repeat the Manchurian blitzkrieg success in a nonnuclear war today.[1] Soviet operations against the Japanese in Manchuria in August 1945 were aided by overwhelming numerical superiority, crushing technological superiority, and a lack of Japanese will to resist. Although any one of these conditions would probably have sufficed for a Soviet victory, all three prevailed in August 1945.

The ratio of forces in Manchuria was ideal. Although Soviet sources place the Soviet superiority at only 1.31:1, their estimates include deep Japanese reserves, which did not engage in combat, and local Manchurian paramilitary troops and militia.[2] In the combat zone (including the operational rear), however, the Soviets enjoyed a pronounced advantage over the Japanese. The ratios for the three Soviet fronts over the Japanese forces were as follows:

- Transbaikal Front--5.8:1
- Second Far Eastern Front--9.2:1
- First Far Eastern Front--2.4:1

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[1]The most exhaustive bibliography on this campaign is found in John Despres, Lilita Dzirkals, and Barton Whaley, *Timely Lesson of History: The Manchurian Model for Soviet Strategy*, R-1825-NA, The RAND Corporation, Santa Monica, Calif., 1976. Two other excellent studies on the subject are Lt. Col. David M. Glantz, *August Storm: The Soviet 1945 Strategic Offensive in Manchuria*, Leavenworth Paper No. 7, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas, February 1983, and *August Storm: Soviet Tactical and Operational Combat in Manchuria, 1945*, Leavenworth Paper No. 8, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas, June 1983. No Soviet histories of the Manchurian campaign approach the brilliance of Col. Glantz's two studies.

[2]Japanese sources give the Soviets a more credible 2.6:1 overall advantage.

The Soviets gained numerical advantages of up to 20-30:1 on the main axes (along 300 kilometers of a 5000-kilometer line of contact). Excluding Soviet and Japanese naval capabilities, the Soviets enjoyed clear-cut technological superiority. Japanese main battle tanks were obsolescent; at least two generations behind the T-34. Japanese aircraft were about three generations behind Soviet YaK-9, PE-2, and IL-10 aircraft.

Such numerical ratios on a Central European front would be inconceivable today. American M1 *Abrams* tanks would take on Soviet T-80s, while Dutch and German *Leopards* battled T-72s. In the air, F-15s and F-16s would fight various MiGs. The U.S. technological advantage in electronics and optics would also serve the U.S. forces well.

After the U.S. nuclear attacks on Hiroshima and Nagasaki, the Japanese forces lost the will to resist and the Kwantung army does not appear to have counterattacked. That is, I found no Soviet sources on counterattacks at the regimental level and above.[3] We know, however, that on April 20, 1945, the German Army Group Mitte launched a huge strategic counterattack against the left flank of the First Ukrainian Front. As a result of this attack, the 2d Polish Army, which was on this flank, lost 20,000 men in only a few days.[4] In contrast, 16 Soviet armies in the Far East lost only 8000 men in the course of the entire campaign.

In summary, Soviet military theorists dream about the Manchurian model. Although the prospects for repeating its bold successes may exist in some TVDs--for example, sparsely defended Iran in the Southern Theater of War or Southern TVD--such is not the case in Central Europe, where the West German Territorial Army alone, even without cooperation

[3]Japanese resistance being only symbolic, to save face before surrendering, one encountered such odd undertakings in the Manchurian campaign as the "railroad assault landings" (*zhelezno-dorozhnyye desanty*) in which groups of Soviet soldiers would board a passenger train, travel several hundred kilometers, alight at a main station and occupy a town, usually without a shot being fired.

[4]For the losses of the 2d Polish Army, see J. Malczewski, "O stratach ludowego wojska polskiego w latach 1943-1945," *Wojskowy Przeglad Historyczny*, No. 2, 1972, pp. 213-231.

from the various NATO corps, could deny the Soviets Manchurian rates of advance.

Soviet air superiority played a role in offensive successes during World War II. As the war dragged on, the Soviet-German air force ratio swung dramatically in favor of the USSR:

- November 1942--1:1.07 (in German favor)
- July 1943--2.8:1 (in Soviet favor)
- June 1944--4.8:1 (in Soviet favor)
- January 1945--7.9:1 (in Soviet favor).[5]

In the Manchurian campaign, the Soviets achieved air superiority on D-day. Unless the Soviet side were to achieve air superiority in Central Europe in a future war, as they did in the later stages of World War II, the successes achieved along the Amur River in 1945 could not be repeated on the Rhine.

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[5]See *Velikaya otechestvennaya voyna Sovetskogo soyuza* (The Great Patriotic War of the Soviet Union) Voyenizdat, Moscow, 1967, p. 569.

Appendix C

ALERT ASSEMBLY AREAS OF WARSAW PACT GROUND FORCES

Each Warsaw Pact ground force unit--regiment, independent battalion, independent company, and even brigade all of whose subordinate units are stationed in the same barrack block--has its own alert assembly area. Alert assembly areas are located either in *garrisons* near established military barracks or in *training camps* located on military reservations where units conduct field exercises and train in tank, artillery, and missile firing.

Functionally, alert assembly areas are divided into training, combat, dummy, and mobilization areas. Each type is usually found in the vicinity of both garrisons and training areas. Figure C.1 shows the locations and types of alert assembly areas.

TRAINING ALERT ASSEMBLY AREAS

Each military unit usually has at least two training alert assembly areas. These are often located on military reservations, some 3 to 10 kilometers from the unit's barracks. Some of the training alert assembly areas are partially or entirely emplaced and have shelters and hiding places for soldiers and equipment. Units use these training areas to practice emergency departures from barracks and the assumption of dispersal positions in alert assembly areas. All soldiers know where the areas are, as emergency training exercises are held periodically.

COMBAT ALERT ASSEMBLY AREAS

Combat alert assembly areas are used for dispersing and hiding forces in case of threatened or actual war during antinuclear maneuver. They are used also to prepare for (1) strategic and operational deployment and (2) the achievement of combat readiness. Such areas may be found on military reservations or any other public or private ground.

The locations of combat alert assembly areas are considered a military secret of the highest order. Only a few unit staff officers and superior staff officers have this information. The members of the

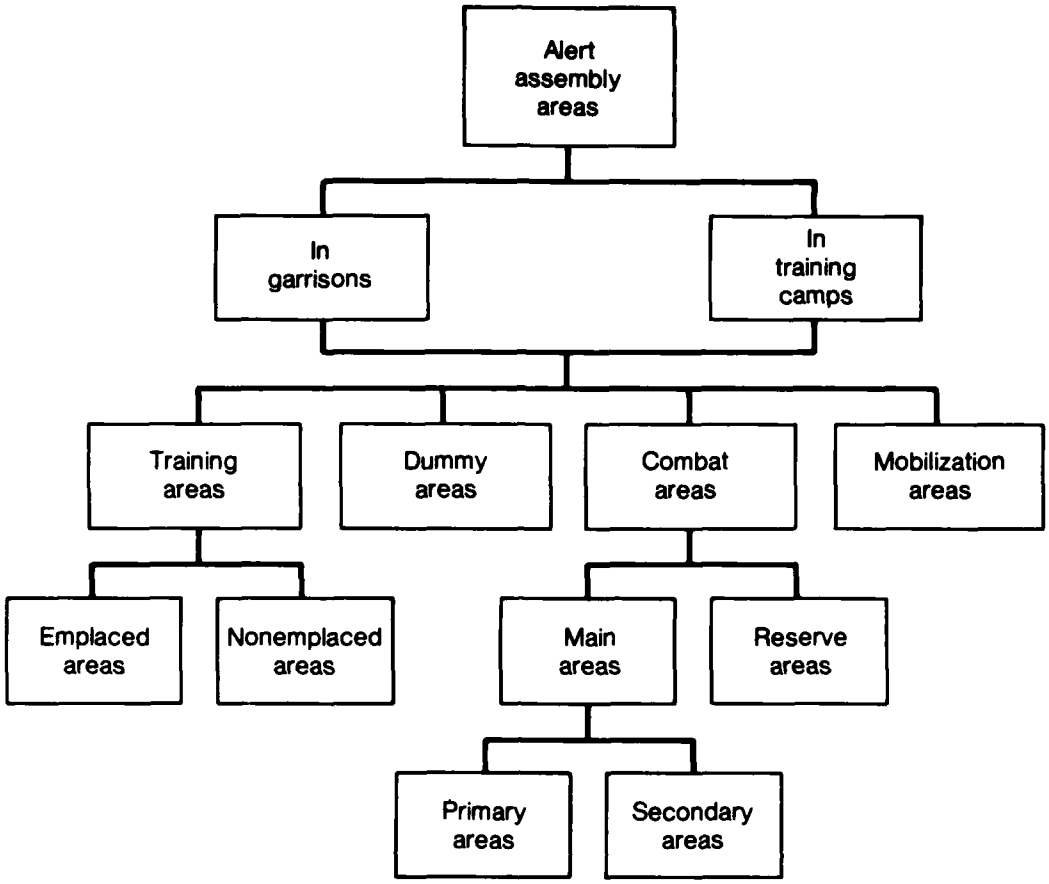

Fig. C.1—Locations and types of Soviet ground force alert assembly areas

regiment as a whole would learn of the area's existence only in the case of an actual combat alarm. Even in this circumstance, the soldiers would initially not know whether they had occupied a combat alert assembly area or simply a new training alert assembly area.

The Soviets have main and reserve combat alert assembly areas. The latter would be used only if, for one reason or another, a unit encountered difficulties in taking up positions in the main area. Sometimes local terrain conditions necessitate the division of the area into a primary area, which the majority of a given unit (e.g., the regimental staff and three battalions) would occupy, and a secondary area, which the remaining battalion of the regiment would use. In such cases, the distance between the primary and secondary areas would not exceed a few kilometers.

Combat alert assembly areas are selected according to the following criteria:

- Areas should be located at least 3 to 5 kilometers from barracks and other objectives that might be targeted in an air attack.
- They should be close enough to the peacetime barracks to permit a regiment traveling on its organic wheeled and tracked vehicles to reach a given area within an hour at night and within 45 minutes at the most during the day.
- They should be well camouflaged and widely dispersed to decrease the dangers of exposure to nuclear attack.[1]
- They should be placed along the expected line of advance in case of war. This may be behind a wide water obstacle near the barracks, or in an area having several entry and exit routes, and if possible, its own source of water.

DUMMY ALERT ASSEMBLY AREAS

Dummy alert assembly areas are intended to confuse the enemy. They are emplaced and contain elements of forces and equipment for deception. In a crisis period or on the eve of an attack, the army level and above would activate operational deception (*operativnaya maskirovka*).

MOBILIZATION ALERT ASSEMBLY AREAS

New units are mobilized virtually from scratch in mobilization alert assembly areas. These areas fulfill the same functions as combat alert assembly areas. They may be located somewhat closer to the garrison and would be gradually built up from the engineering standpoint after the beginning of mobilization.

[1]Warsaw Pact doctrine calls for hiding forces in small, rather than large, forests and woods. The latter, like large cities, are considered undesirable because they could become death traps in the event of nuclear attack.

Similarly, staffs at all levels have alert assembly areas to which their headquarters subunits, protection, and security would deploy. Depending on the mission, units and staffs would move to their combat alert assembly areas, to the extent possible, in a dispersed mode, but not so dispersed as to impede command. March columns would usually be formed in readiness for rapid departure from the area. Forces and staffs would remain in the areas relatively briefly.

At the division level, the territorial distribution of combat alert assembly areas of individual regiments would correspond to the division march order. Consequently, the division reconnaissance battalion should have the combat alert assembly area farthest forward along the anticipated line of march toward the battle area.

The procedures for moving the troops from the barracks to their combat alert assembly areas are as follows: Upon receiving the appropriate signal, the regiment's subunits and all of their combat equipment gather in the barracks or training camp alert assembly points, which are assigned in advance to individual companies, batteries, and battalions. When ready to march, the units depart for the combat alert assembly area in battalion or company columns (depending on local conditions). Traffic control posts are placed along the march route in advance. The regimental reconnaissance company, which arrives first, clears the combat alert assembly area of unauthorized persons, civilian vehicles, and/or grazing animals and establishes a security perimeter.

The air defense subunits, on reaching the area, immediately deploy their forces and equipment in readiness to open fire on enemy air targets. Under conditions of increased combat readiness, it may take 2 to 4 hours, depending on terrain, the distance from barracks, the time of day, and the weather, for the entire regiment to form up, move, and settle into the combat alert assembly area. About an hour of this time goes to alerting the subunits of the regiments and their moving to their action stations.

In certain cases, WP divisions might be transferred directly from their barracks to forward departure areas on the eve of a war, bypassing the combat alert assembly areas. The Polish 12th Mechanized Division, for example, has such a forward departure area just inside the GDR. On

several occasions, coordinated in the WP high command, the division left its barracks right after an alert was announced and within a few hours had deployed west of the Oder River inside East Germany.[2]

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[2]Interview with a former high-ranking officer of this division, May 1985.

Appendix D

COMBATING COMMAND POSTS AND FIELD DEPOTS

In modern warfare, command posts (CPs) are among the most important enemy targets. Their destruction or incapacitation immediately reduces the efficiency of air-land force coordination and control and may well decelerate the rate of attack within a short period. A period of confusion inevitably follows the destruction of CPs, during which the forces are particularly vulnerable.

CHOOSING COMMAND POSTS FOR ATTACK

In selecting a command post for destruction, the attacker must decide which CP elements at which levels of command would prove most lucrative. In a war fought with conventional weapons in Central Europe, NATO would probably concentrate on higher-level CPs within the forward area of the Western TVD. In my opinion, the destruction of even a series of key divisional CPs would immediately and seriously degrade the activity of the C^3 system at all five subordinate regiments and in all 25 battalion CPs.[1] The destruction of an army or front CP would have still greater consequences.

In considering which CP elements to destroy, NATO decisionmakers presumably would bear in mind the fact that the Warsaw Pact high command deploys a network of redundant CPs at each command level. Consequently, the destruction of even the main CP would not halt the functioning of the entire network; one or more of the remaining CPs would assume the functions of the one destroyed, and the C^3 system would continue to function. An attack on CPs, therefore, should be concentrated at one command level and carefully synchronized.

Three key elements--the forward, main, and alternate main CPs--exist at each level of command; the simultaneous destruction or incapacitation of these elements would cause the whole command system to

[1]Lt. Col. Donald L. Mercer suggests that regiment CPs would be the best targets; see "Targeting Soviet Forces," *Military Review*, May 1984, p. 35.

break down immediately. *The three CPs are interchangeable; each could assume operational control over subordinate forces at any moment.* Thus, only by incapacitating all three of them could NATO expect to significantly disrupt command and control at the given level.

Neither the rear nor the alternate rear CP (the other elements at each command level) influences combat developments. Nor would their destruction in the absence of a successful attack on the main CPs totally disrupt logistic activities, as a group of rear service officers are attached to the main CP. If the rear and alternate rear CP were destroyed, these officers would quickly assume the most critical functions of the destroyed posts.

A fourth key element might in some cases have to be destroyed simultaneously with the forward, main, and alternate CPs. This is the second echelon of the main CP, a group of generals and officers that, traveling by helicopter or STOL aircraft, would precede the main CP staff to newly assigned main CP areas.

The most difficult CPs to destroy would be the front-level network, especially the front main CP. From D-day to D+3, and sometimes even to D+5, the front main and alternate CPs would remain in fortified bunkers, deep underground and highly resistant even to nuclear strikes. Given the expected security of these bunkers and their location in protected terrain, attacks with conventional weapons would be unlikely to prove effective against them, even when their location was precisely known.

The moment the front main CP began to relocate, however, sometime between D+3 to D+5, it would become much more readily identifiable and vulnerable to attack. Within a day, the front's alternate main CP would also move forward. Thus, to catch all key front CPs as they departed fortified positions would require a waiting period of four to six days from the outbreak of the war. Only the front forward CP would be potentially vulnerable as early as D+1.

Army CPs, especially main and alternate main, would be as difficult as front-level CPs to attack. Soviet armies on East German and Czechoslovak territory during peacetime probably also have prepared, fortified command posts, as described above. Thus, NATO would have to attack previously identified fortified command posts or wait until the CPs were forced to move forward; the first echelon armies would probably

not move before D+1; they would most likely move during the night of D+1 to D+2.

All three key elements of division CPs would move (but not simultaneously) by noon on D-day. Ideally, one would bring these CPs rapidly under fire and continue to attack them until they were completely destroyed. However, such an attack would be no easy task. The main and alternate CPs would be difficult to locate and attack because they would be well camouflaged and deployed in protected terrain. A forward CP deployed in a column of armored command vehicles would be mixed in with many other such vehicles within 5 to 10 kilometers of the line of contact.

The following principles apply to attacks on enemy command posts:

- All three key elements--forward, main, and alternate main--should be hit in a concentrated, synchronized attack.
- Air forces should attack field-deployed CP elements; long-range artillery and surface-to-surface missiles should be used against stationary CP elements.
- If main and alternate CPs at the front and army level were deployed in fortified bunkers at the beginning of war, it would be possible to combat them effectively only after they had emerged from their fortified hideouts.
- Strikes against enemy C^3 elements should be selective. Barraging all levels indiscriminately would not prove effective.

Although forward and alternate CPs at all levels are relatively compact, the main CPs occupy a substantial area: 1 to 1.5 square kilometers for divisions; 3 to 4 square kilometers for armies; and 7 to 8 square kilometers for fronts. Their relatively large size reflects their internal composition, laid out in Fig. D.1, and the presence of numerous supporting and protecting units. Table D.1 gives the areas of the most important command posts.

However, only approximately 10 percent of the total area occupied by the main CPs is vitally important for the overall C^3 system. In most cases, it would suffice to destroy only this critical 10 percent or less

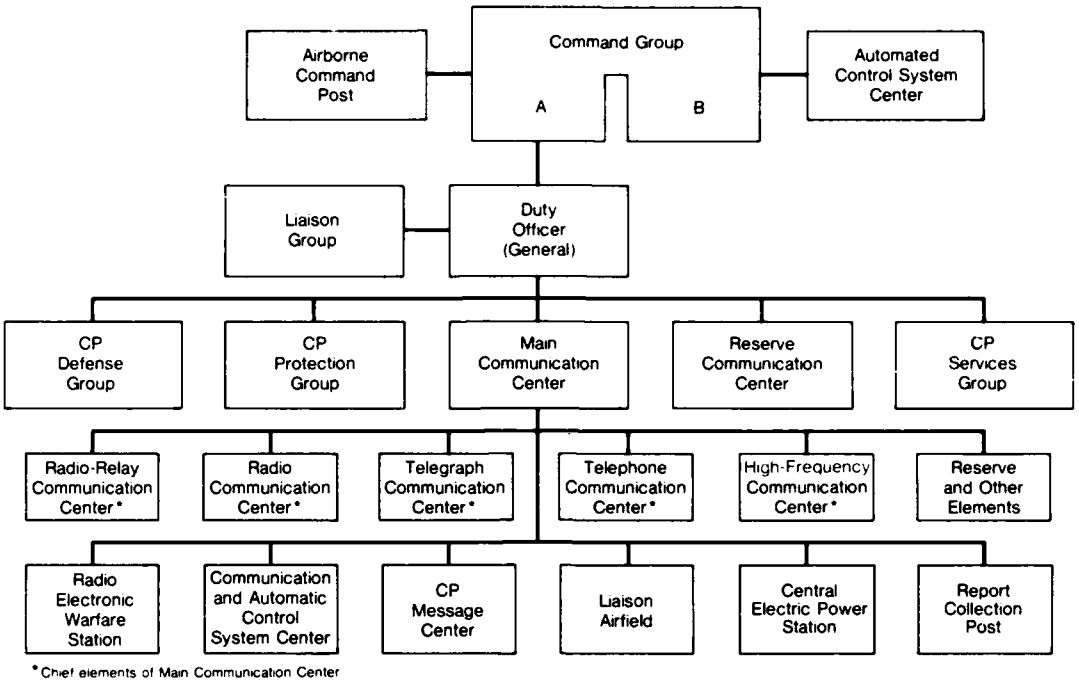

Fig. D.1—Principal elements of Soviet main command post

of the overall CP targets to severely degrade effectiveness of the CP. As shown on Fig. D.1, the critical 10 percent includes

- Command group "A"
- Automated control system center
- General duty officer and his duty team
- The five chief elements (marked by asterisks [*] on Fig. D.1) of the main communication center (*glavnyy uzel svyazi*) and its central electric power source.

Of course, the first mission of an air attack against a major CP would involve incapacitating its air defense assets. In this context, I disagree with Lt. Col. Mercer, who recommended that "the attack on the C^3 system must be synchronized with attacks on other elements of Soviet force."[2] This type of attack would disperse the effort. I understand synchronization, in this case, as a coordinated, simultaneously launched attack on all three key CP elements of the given level of the C^3 system.

[2]Mercer (1984), p. 35.

Table D.1

AREA OF MOST IMPORTANT COMMAND POSTS OF MAIN-AXIS FRONT
(in hectares)

	Formation		
	Division	Army	Front
Area of individual command post			
Forward[a]	2-4	4-6	5-7
Main[b]	10-15	30-40	70-80
Alternate[c]	3-4	8-10	30-45
Total area of CPs per formation	15-23	42-56	105-132
Number of formations per front	14-20	3-5	1
Total area of CPs of all formations	210-460	126-280	105-132
Average	335	203	118
Total area of all CPs of front			441-872
Average			656.5[d]

[a]Counting entire area.

[b]Counting only area of backbone elements, i.e., 10 percent of total area.

[c]Counting entire area of division and army alternate main CPs and 30 percent of area of front alternate main CPs.

[d]Thus, division CPs occupy 51 percent of total target area; army CPs, 31 percent; and front CPs, 18 percent.

COMMAND POST VULNERABILITIES

Of the various CP elements discussed above, the main CPs remain the most vulnerable to air and conventional missile attacks, as they present a relatively large target and thus one that is relatively easier to destroy. Yet, NATO forces would be seriously challenged to locate the

above-noted critical elements of a main CP, as such elements would be dispersed in a large area that included substantial camouflage in small built-up or wooded areas. The same also applies to rear CPs.

NATO forces would have considerably more difficulty finding the alternate CPs, which have only approximately 15 percent of the vehicles that the same level of main CPs have. Furthermore, alternate CPs would maintain radio silence unless forced into action (their radio stations would act only as receivers) and neither messengers nor liaison helicopters and aircraft would come and go; in a word, there would be no movement.

Forward CPs would be even more difficult to discover and destroy, as they are, numerically, the smallest C^3 system element. Usually located in the combat formations of the assault forces, they would move virtually all the time. Moreover, they would have the largest number of armored vehicles, including the commander's tank.

Command posts in motion, in march columns, would be most vulnerable to air attack, especially during short halts. When moving, they would be most vulnerable in gullied terrain, in areas where bridges, viaducts, embankments, and other choke points made vehicular maneuver off the road difficult or impossible, and in open country without natural cover or hiding places. Columns of CPs pulling into new locations, in a halting area for a short period (i.e., not dug in), and forming march columns would be especially vulnerable to long-range artillery and surface-to-surface missile fire. According to Mercer, each level of Soviet organization has combinations of vehicles, antennas, and communications equipment peculiar only to that level; these differences somewhat simplify identification.[3]

The following physical indicators might reveal the location of CPs:

- Large concentration of personnel and noncombat vehicles in a relatively small area
- Heavily guarded area or objective

[3]Mercer (1984), p. 35.

- Traffic jam involving numerous jeeps or jeeps moving in small groups of two to five vehicles and motorcycles in one area
- Relatively large net of traffic control posts
- Absence of local civilians in small villages, or a portion of a small town, or a block of a large city
- Concentration of antenna communication cables in one small area and many antennae
- Small isolated airfield(s) for use by liaison helicopters and STOL aircraft with single takeoffs and landings
- Numerous barriers across the roads and paths in wooded areas.

FIELD SUPPLY DEPOTS

The location of supply depots and dumps (including ammunition) deployed in the field can often be identified by the presence of many large trucks and trailers and a paucity of combat vehicles, tanks, APCs, and field artillery. Furthermore, from the division level upward, these depots are closely tied to the road network. Depots are always located near a reasonably good road, or, better still, a major highway. Front, and sometimes army, depots are placed near large railway stations or major rail junctions.

According to all WP field manuals, trucks loaded with supplies deliver their cargoes directly to supply depots of the next lower level. After being unloaded, they go to the medical point at the same level as the supply depot. At the medical point, they pick up wounded personnel and take them to the next higher level, for example, from a divisional medical point to an army field hospital. The trucks then return to their original supply depot. Medical points and supply depots belonging to the same level (regiment, division, or army) must, by regulation, be located on the same road. Figure D.2 shows the movement between depots and medical points at various levels.

At each level, from the regiment up, the Soviets have separate field depots for ammunition, fuel, and food. Each type of supplies is moved by special vehicles appropriate for this mission. At division level, for example, ammunition is transported by URAL-375 trucks, fuel

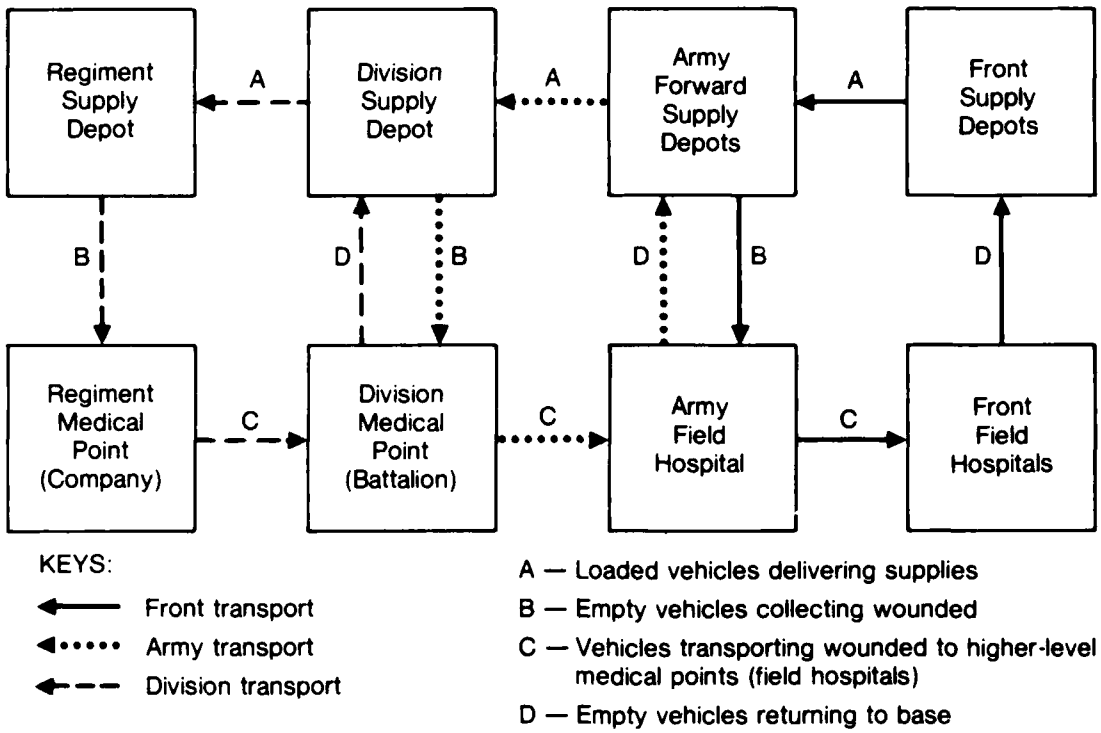

Fig. D.2—Movement between depots and medical points

by MAZ-543 trailers, and food by KAMAZ-532 trucks.[4] These vehicles differ considerably in external appearance. If one knew their shapes, one could identify the individual transporters moving along major roads like route *D* in Fig. D.2 by direct observation or high-resolution imagery taken from the air. One could then search along this route to discover the location of various types of depots.

Fuel dumps would be more difficult to find, because fuel tankers do not transport the wounded and thus do not call at medical points and hospitals. However, the presence of field pipelines at the division, army, and front levels might give them away.

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[4]The associations of specific vehicles and types of supply reflect the system that existed in the 1960s and may not be valid today. What is important here is not the precise type of vehicle, which may well have been updated, but the principle involved.

Appendix E

NATO COMMAND POSTS UNDER ATTACK

Almost all Soviet World War II memoirs, in reflecting on the opening days of the German invasion in 1941, point to the loss of command and control as one of the main reasons for the disasters that befell Soviet forces at that time. The Germans immediately paralyzed almost the entire Soviet command, control, and communications system at the corps, army, and front levels across the entire combat zone. Although front headquarters continued to communicate with the high command in Moscow, they were frequently unable to contact their subordinate armies. The latter could not communicate with their corps. Air and ground force command elements also were cut off from each other.

The Russians will never forget this bitter lesson. One may assume, therefore, that in a major conflict in Europe they would make every effort to preserve their own command and control capabilities. They would also undertake extensive, multifarious, and continuous operations to disrupt NATO's C^3.

SOVIET PROCEDURES FOR ATTACKING CPs

Soviet military strategy calls for seizing and maintaining the initiative, while depriving the enemy of the opportunity to exercise it. Destroying the enemy's C^3 capabilities is considered one of the best means of accomplishing this objective. Peacetime Soviet-Warsaw Pact military strategy doubtless offers basic guidelines on how to combat NATO C^3, and these guidelines are systematically tested during exercises and improved.

During the first few hours of a conventional war in Europe, the Warsaw Pact high command would almost certainly target NATO airfields, nuclear weapons, air defenses, and artillery concentrations. At the same time, WP forces would probably attack key elements of the NATO C^3 network. The scenario that follows is therefore based on the assumption that the attacks on NATO C^3 will begin shortly after H-hour on D-day.

Table E.1 suggests possible guidelines for deployments and means of combating NATO command posts at various levels. According to the table, a WP front headquarters would organize and conduct combat operations against NATO corps CPs. Several factors contribute to this seeming inequality of opposing command levels.

- First, thanks to its current military superiority in Central Europe, the WP high command would probably deploy a front consisting of three to five combined-arms and tank armies against two adjacent NATO corps. Thus, each NATO corps would face two to three armies in the WP first operational echelon.
- Second, the WP high command would probably organize the opposition to the NATO corps CPs at the front level rather than to assign the task to one of the two to three armies attacking the given corps.
- Third, and most important, the front headquarters has at its disposal, as organic elements, literally all of the means required for combating the two NATO corps headquarters in the offensive sector of the front (as Table E.1 shows).

SCENARIO ASSUMPTIONS

The front's offensive sector contains two NATO corps command posts, each consisting of three elements: a main CP, a forward CP, and a rear CP. To paralyze the corps-level C^3 network, the Soviets need suppress only the first two CPs, as the rear CP plays no part in operational matters. The NATO C^3 network, unlike the Soviet-WP, includes no alternate CPs.[1]

At the beginning of the war in Europe, the NATO corps CPs are positioned as follows:

- The main CPs are located in well-fortified, underground bunkers, 40 kilometers behind the covering force area,[2] about 70 kilometers from the West German border (this distance might

[1]Soviet CPs are discussed in Sec. V and Appendix D, above.

[2]This estimate appears in N. K. Glazunov and N. S. Nikitin, *Operatsiya i boy. Inostrannyye armii*, Voyenizdat, Moscow, 1983, p. 144.

Table E.1

NOTIONAL WP GUIDELINES FOR COMBATING NATO COMMAND POSTS IN CENTRAL EUROPE

WP Command Level Assigned to Combat Specific NATO CP

Warsaw Pact	NATO
Stavka VGK or theater hq[a]	AFCENT; AAFCE
TVD hq	CENTAG; NORTHAG; 2 & 4 ATAF
Front	Army, corps
Army	Division
Division	Brigade
Regiment	Battalion

WP Means at Each Command Level for Combating NATO CPs

Combat Means	VGK	TVD	Front	Army	Div	Regt
SSMs with conventional warheads	yes	yes	yes	yes	no	no
Long-range bombers	yes	yes	no	no	no	no
Fighter-bombers; tactical bombers	yes	yes	yes	yes	no	no
Ground attack fighters	no	yes	yes	yes	yes	no
Attack helicopters (*Hind; Havoc*)	no	no	yes	yes	yes	yes
Electronic warfare with all ECM	yes	yes	yes	yes	yes	?
Artillery	no	no	yes[b]	yes	yes	yes
Parachute spetsnaz	yes	yes	yes	no	no	no
Heliborne units						
Spetsnaz	no	no	yes	no	no	no
Regular	no	no	yes	yes	yes	no
GRU (intelligence) agents[c]	yes	yes	yes	?	no	no

[a]Stavka VGK in a one-front war; theater in a multifront war.

[b]Long-range artillery only, against corps forward CPs, starting D+1.

[c]GRU agents in place to sabotage signal systems, etc.

actually range from 65 to 90 kilometers, depending on the depth of the CFA).

- The forward command posts are ensconced in partially entrenched, armored, mobile command vehicles, 20 kilometers behind the CFA,[3] 50 kilometers behind the peacetime political borders (the distance might actually range from 45 to 70 kilometers).

Soviet-WP intelligence already knows the locations of the fortified, underground sites of the corps main CPs. It closely monitors these corps as they relocate from their peacetime headquarters to their bunkers. It does not, however, have exact intelligence on the location of the NATO corps mobile forward CPs.

The Group of Soviet Forces, Germany, even in peacetime, has a special department charged with monitoring potential enemy command posts. The department, probably part of the intelligence directorate of the GSFG staff, is well prepared for the task of combating these CPs in wartime. It has detailed plans and terrain mock-ups of the NATO corps fortified underground C^3I facilities, as well as data about the defense systems of these CPs.

All units preassigned to assault the NATO corps CPs are organic to the GSFG and subordinated to the GSFG staff. During the preattack maneuvers that began on D-9, the command and staff (*polevoye upravleniye*--field administration) of the GSFG splits to form two front commands.

Specially trained spetsnaz units, including air assault elements, will execute the plans to destroy the NATO corps CPs. These forces are prepared to carry out the various operations noted in Table E.2. From D-2 to D-1, the specialized assault forces conduct simulated attacks on a mock-up of the chosen targets. The planned second assault echelon--the regular heliborne air assault battalion, which is a part of the heliborne air assault brigade--makes similar preparations.

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[3] Ibid.

Table E.2

NOTIONAL SEQUENCE OF WP FIRST STRIKE ON NATO COMMAND POSTS

Successive Strike Measures	Number of Assigned Forces	Time of Action in NATO Corps Area	
		Main CP	Forward CP
1. GRU agents begin sabotage	1 group	Continuously	--
2. Electronic countermeasures	Front EW unit	Continuously	Continuously
3. SSM strike (1st wave)	2-4 brigades	H-hour--H+0005	--
4. Fighter-bomber strike	Up to 1 div	H+0010--H+0020	H-hour--H+0014
5. Ground attack fighter strike	1-2 regiments	H+0025--H+0030	H+0019--H+0024
6. SSM strike (2d wave)	Same as item 3	H+0035--H+0040	H+0029--H+0034
7. Attack helicopter fire preparation	1 regiment	H+0050--H+0055	H+0039--H+0044
8. Parachute drop	1 company	H+0100--H+0109	--
9. Heliborne drop (1st echelon)	1 battalion	H+0110--H+0115	H+0045--H+0050
10. Heliborne drop (2d echelon)	1 battalion	H+0125--H+0130	H+0100--H+0110
11. Attack helicopter fire support	Same as item 7	H+0135--H+0200	H+0115--H+0140
12. Air-land assault	Same as items 5, 7, 8, 9, 10	H+0135--H+0200	H+0115--H+0140
13. Withdrawal	All forces	H+0200--H+0230	H+0140--H+0200

NOTES: H-hour marks the start of the fire attack (i.e., the beginning of the first wave of the SSM strike) on the NATO corps CP. The battalions involved in the heliborne drop are delivered by a transport helicopter battalion.

ESTIMATED WP CAPABILITIES

According to Table E.2, the front strikes both the main and the forward command posts of both NATO corps simultaneously. A single front probably could successfully carry out such an attack in an actual war, as the Soviets and their WP allies would likely engage the following forces:

- 20 percent of the front's aviation
- 50 to 100 percent of the front-level SSM brigades, using improved conventional munitions
- 30 percent of the front-level helicopter units
- 20 percent of the front's spetsnaz brigade.

This deployment assumes that the front has directly subordinated to it (among other things):

- An air army with two ground fighter divisions, two fighter-bomber divisions, two interceptor aviation divisions, two attack helicopter regiments, three transport helicopter regiments, and other units
- Four SSM brigades
- One spetsnaz brigade consisting of four assault battalions.

Although such an attack would represent a relatively large effort, the forces would engage in it for under two hours. Moreover, if the CPs of the two NATO corps were not struck simultaneously, many of the forces that took part in the operation against the first corps could later the same day attack the second corps command posts.

Even though WP forces would probably not achieve air superiority over NATO, their use of heliborne and airborne assault forces in a first conventional offensive would present a real threat to NATO C^3 installations. The Soviets almost certainly intend to undertake heliborne assaults at the tactical and operational levels, as well as airborne insertions of spetsnaz sabotage forces, early in the conflict, without awaiting the outcome of the air battle.

The Warsaw Pact might even succeed in gaining local air superiority without achieving overall air superiority. In one or two relatively narrow and shallow areas (like that described in this scenario), the Warsaw Pact might control the air from the start of the war. Moreover, helicopters using appropriate tactics and flying close to the ground might avoid NATO's fighter-interceptors and ground-based defenses and thus successfully ferry in assault forces in areas where the Warsaw Pact does not enjoy even local air superiority.

GLOSSARY

AA	antiaircraft
AAA	antiaircraft artillery
AAD	amphibious assault division
AAFCE	Allied Air Forces Central Europe [NATO]
ACCHAN	Allied Command Channel [NATO]
ACE	Allied Command Europe [NATO]
ACLANT	Allied Command Atlantic [NATO]
AFCENT	Allied Forces Central Europe [NATO]
AFNORTH	Allied Forces Northern Europe [NATO]
APC	armored personnel carrier
ATAF	allied tactical air force [NATO]
BALTAP	Allied Forces Baltic Approaches [NATO]
BMP	*boyevaya mashina pekhoty* (infantry fighting vehicle) [USSR]
brig	brigade
CENTAG	Central Army Group [NATO]
CFA	covering force area
CGF	Central Group of Forces (Czechoslovakia) [USSR]
CoS	chief of staff
CP	command post
CSSR	Czechoslovak Socialist Republic
C^2	command and control
C^3	command, control, and communications
C^3I	command, control, communications, and intelligence
DAG	divisional artillery group
div	division
ECCM	electronic counter-countermeasures
ECM	electronic countermeasures
engr	engineering (troops) [USSR]
EW	electronic warfare
FATAC	French Tactical Air Force
FEBA	forward edge of the battle area
FM	field manual
FY	financial year
GDP	general defense position
GDR	German Democratic Republic
GK	*glavnoye komandovaniye* (high command) [USSR]
GKO	State Defense Committee [USSR]
GRU	Main Intelligence Directorate [USSR]
GSFG	Group of Soviet Forces, Germany [USSR]
ha	hectare
hq	headquarters
ICBM	intercontinental ballistic missile
IISS	International Institute for Strategic Studies [London]
INF	intermediate nuclear forces
inf div	infantry division
KGB	Committee of State Security [USSR]
LANDJUT	Joint Command of Schleswig-Holstein [NATO]
LRA	long-range artillery

MB	maneuver (tank or motorized rifle) battalion [USSR]
MBA	main battle area
MBT	main battle tank
MC	military council [USSR]
MD	military district [USSR]
M-day	mobilization day
MICV	mechanized infantry combat vehicle
MP	military police
MR	motorized rifle (troops) [USSR]
MRBM	medium-range ballistic missile
MRL	multiple rocket launcher
MVD	Ministry of Internal Affairs [USSR]
NAEWS	NATO airborne early warning system
NATO	North Atlantic Treaty Organization
NGF	Northern Group Forces (Poland) [USSR]
NORTHAG	Northern Army Group [NATO]
OMG	operational maneuver group
POL	petroleum, oil, lubricants
PVO	*protivovozdushnaya oborona* (air defense) [USSR]
RAG	regimental artillery group
rgt	regiment
SACEUR	Supreme Allied Command Europe [NATO]
SAM	surface-to-air missile
SGF	Southern Group Forces (Hungary) [USSR]
SP	self-propelled (gun)
spetsnaz	*(voyska) spetsial'nogo naznacheniya* (special designation [diversionary] forces) [USSR]
SSM	surface-to-surface missile
SSR	Soviet socialist republic [USSR]
Stavka	Headquarters (of Supreme High Command [VGK]) [USSR]
STOL	short takeoff and landing (aircraft)
SU	Soviet Union
SVE	*Sovetskaya voyennaya entsiklopediya* (Soviet Military Encyclopedia), 1976-1980 [USSR]
TA	tank army
TO&E	table of organization and equipment
TV	*teatr voyny* (theater of war) [USSR]
TVD	*teatr voyennykh deystviy* (theater of military operations) [USSR]
UKAIR	Air Forces of the United Kingdom
VES	*Voyennyy entsiklopedicheskiy slovar'* (Military Encyclopedic Dictionary), 1983 [USSR]
VGK	*Verkhovnoye glavnokomandovaniye* (Supreme High Command) [USSR]
VIZh	*Voyenno-istoricheskiy zhurnal* (Military History Journal)
VOSO	Military Transportation Directorate [USSR]
VTA	Military Transport Aviation [USSR]
WP	Warsaw Pact

REFERENCES

"An Enveloping Detachment in Battle Formation," *Soviet Military Review*, May 1983.

Baird, Gregory C., *Soviet Intermediary Strategic C^2 Entities--The Historical Experience*, The BDM Corporation, McLean, Va., 1979.

Baykeyev, R., "Peredovoy otryad forsiruyet reku" (A Forward Detachment Forces the River), *Voyennyy vestnik*, December 1983.

Biryuzov, S. S., *Surovyye gody* (The Grim Years), Voyennoye Izdatel'stvo, Moscow, 1966.

Chocha, Lt. Gen. B., *Rozwazania o taktyce* (Consideration of Tactics), MON, Warsaw, 1982.

-----, *Rozwazania o sztuce operacyjnej* (Consideration of Operational Art), MON, Warsaw, 1984.

Cotter, Donald R., et al., *The Nuclear "Balance" in Europe: Status, Trends, Implications*, USSI Report 83-1, United States Strategic Institute, Washington, D.C., 1983.

Cwierdzinski, J., *Taktyka na wspolczesnym polu walki* (Tactics on the Contemporary Battlefield), MON, Warsaw, 1970.

Daniel, Cz. "Dzialanie pododdzialow obejscia w terenie lesisto-jeziornym" (Combat Operations of Enveloping Units in Forest-Lake Terrain), *Przeglad Wojsk Ladowych*, February 1984.

Despres, John, Lilita Dzirkals, and Barton Whaley, *Timely Lesson of History: The Manchurian Model for Soviet Strategy*, R-1825-NA, The RAND Corporation, Santa Monica, Calif., 1976.

Dick, C. J., "Soviet Operational Manoeuvre Group--A Closer Look," *International Defense Review*, No. 6, 1983.

-----, "Soviet Doctrine, Equipment Design and Organization: An Integrated Approach to War," *International Defense Review*, No. 12, 1983.

Donnelly, Christopher, "Operations in the Enemy Rear. Soviet Doctrine and Tactics," *International Defense Review*, January 1980.

-----, "The Soviet Operational Manoeuvre Group--A New Challenge for NATO," *International Defense Review*, No. 9, 1982.

-----, "Soviet Operational Concepts in the 1980s," in *Strengthening Conventional Deterrence in Europe. Proposals for the 1980s*, Macmillan, London, 1983.

-----, "The Development of the Soviet Concept of Echeloning," *NATO Review*, December 1984.

Douglass, J. D., Jr., *The Soviet Theater Nuclear Offensive*, U.S. Government Printing Office, Washington, D.C., 1976.

Dzirkals, Lilita, *"Lightning War" in Manchuria: Soviet Military Analyses of the 1945 Far East Campaign*, P-5589, The RAND Corporation, Santa Monica, Calif., January 1976.

Erickson, John, *The Road to Berlin*, George Weidenfeld and Nicolson, London, 1983.

Erickson, John, Lynn Hansen, and William Schneider, *Soviet Ground Forces. An Operational Assessment*, Westview Press, Boulder, Colo., 1986.

FM 100-2-1 and FM 100-2-2 (see U.S. Army Training and Doctrine Command, *Soviet Army Operations and Tactics*).

FM 100-5 (See U.S. Department of the Army, Headquarters, *Operations*).

Gareyev, Col. Gen. Makhmud, *Frunze--Voyennyy teoretik: vzglyady M. V. Frunze i sovremennaya voyennaya teoriya* (Frunze--Military Theoretician: The Views of M. V. Frunze and Contemporary Military Theory), Voyennoye Izdatel'stvo, Moscow, 1985.

Glantz, Lt. Col. David M., *August Storm: The Soviet 1945 Strategic Offensive in Manchuria*, Leavenworth Paper No. 7, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas, February 1983.

-----, "Soviet Operational Formation for Battle: A Perspective," *Military Review*, February 1983.

-----, *August Storm: Soviet Tactical and Operational Combat in Manchuria, 1945*, Leavenworth Paper No. 8, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas, June 1983.

Glazunov, N. K., and N. S. Nikitin, *Operatsiya i boy. Inostrannyye armii* (Operations and Battle. Foreign Armies), Voyennoye Izdatel'stvo, Moscow, 1983.

Grishin, S. V., and N. N. Tsapenko, *Soyedineniya i chasti v boyu* (Formations and Units in Battle), Voyennoye Izdatel'stvo, Moscow, 1985.

Grylev, A. N., *Za Dneprom* (Across the Dnepr), Voyennoye Izdatel'stvo, Moscow, 1963.

-----, *Dnepr-Karpaty-Krym* (Dnepr-Carpathians-Crimea), Nauka, Moscow, 1967.

Gurkin, Maj. Gen. V., "Some Questions from the Experience of the Creation and Activity of High Commands of Direction Troops," *Voyenno-istoricheskiy zhurnal*, July 1984.

Gurkin, Maj. Gen. V. V., and M. I. Golovnin, "On the Matter of Strategic Operations in the Great Patriotic War of 1941-1945," *Voyenno-istoricheskiy zhurnal*, No. 10, October 1985.

Hemsley, Brigadier John, *Soviet Troop Control*, Brassey's Publishers, Oxford and New York, 1982.

Hines, John G., and Phillip A. Petersen, "The Warsaw Pact Strategic Offensive" The OMG in Context," *International Defense Review*, No. 10, 1983.

-----, "The Conventional Offensive in Soviet Theater Strategy," *Orbis*, Fall 1983.

-----, "The Soviet Conventional Offensive in Europe," *Military Review*, No. 4, 1984.

-----, "Changing the Soviet System of Control," *International Defense Review*, No. 3, 1986.

Isby, David C., *Weapons and Tactics of the Soviet Army*, Jane's Publishing Inc., London, 1981.

Istoriya vtoroy mirovoy voyny (History of the Second World War), 12 vols., Voyennoye Izdatel'stvo, Moscow, Vol. 8, 1977.

Ivanov, S. P., and N. Shekhavtsov, "Experience of the Work of the High Commands in Theaters of Military Operations," *Voyenno-istoricheskiy zhurnal*, November 1981.

Jane's Defence Weekly, November 24, 1984.

Johnson, Stephen L., "Soviet Electronic Warfare. A Review of Published Material," *International Defense Review*, No. 2, 1985.

Kennedy, Floyd D., Jr., "The Radioelectronic Struggle: Soviet EW Doctrinal Development," *Signal*, December 1984.

Kireyev, N., and N. Dobchenko, "Iz opyta boyevogo primeneniya peredovykh otryadov tankovykh (mekhanizirovannykh) korpusov," (Combat Employment of Forward Detachments of Tank [Mechanized] Corps), *Voyenno-istoricheskiy zhurnal*, September 1982.

Konev, I. S., *Zapiski Komanduyushchego frontom 1943-45 gg.* (Notes of a Front Commander 1943-45), Voyennoye Izdatel'stvo, Moscow, 1981.

Konopka, R., "Wspoldzialanie rzutu ladowego oddzialu wydzielonego z rzutem powietrznym" (Coordinating the Actions of the Ground and Air Elements of a Forward Detachment), *Przeglad Wojsk Ladowych*, June 1982.

Konoplya, P., "V otryve ot glavnykh sil" (Out of Contact With the Main Forces), *Voyennyy vestnik*, October 1982.

Konopnicki, A., "Dzialanie batalionu jako oddzialu wydzielonego" (Battalion-Size Forward Detachment in Combat), *Przeglad Wojsk Ladowych*, December 1984.

Kovalev, I. V., *Transport v velikoy otechestvennoy voyne 1941-45 gg.* (Transportation in the Great Patriotic War, 1941-45), Nauka, Moscow, 1981.

Kozlov, Army General M. M., "Soviet Strategic Leadership in the Great Patriotic War," *Voyenno-istoricheskiy zhurnal*, July 1985.

Kulikov, Victor G., "Strategic Leadership of the Armed Forces," *Voyenno-istoricheskiy zhurnal*, June 1975, in U.S. Joint Publications Research Service, *Translations on USSR Military Affairs*, No. 1360, July 3, 1978.

Losik, Marshal of Tank Troops O. A., *Stroitel'stvo i boyevoye primeneniye sovetskikh tankovykh voysk v gody velikoy otechestvennoy voyny* (Organization and Combat Employment of Soviet Tank Troops During the Great Patriotic War), Voyennoye Izdatel'stvo, Moscow, 1979.

Mala Encyklopedia Wojskowa (Small Military Encyclopedia), 3 vols., MON, Warsaw, Vol. 3, 1971.

Malczewski, J., "O stratach ludowego wojska polskiego w latach 1943-1945" (Concerning the Losses of the Polish People's Army, 1943-1945), *Wojskowy Przeglad Historyczny*, No. 2, 1972.

Malinovskiy, Marshal of the Soviet Union Rodion Ya., *Final* (The Finale), Nauka, Moscow, 1966.

Mercer, Lt. Col. Donald L., "Targeting Soviet Forces," *Military Review*, May 1984.

Michalak, W., "Lotnictwo w dzialaniach rajdowo-manewrowych wojsk ladowych" (The Air Force Role in Ground Force Raid-Maneuver Operations), *Przeglad Wojsk Lotniczych i Wojsk OPK*, February 1982.

The Military Balance 1983-1984, International Institute for Strategic Studies (IISS), London, 1983.

The Military Balance 1984-1985, International Institute for Strategic Studies (IISS), London, 1984.

The Military Balance 1985-1986, International Institute for Strategic Studies (IISS), London, 1985.

The Military Balance 1986-1987, International Institute for Strategic Studies (IISS), London, 1986.

Musial, A. "Dzialanie bojowe lotnictwa na korzysc operacyjnych grup manewrowych" (Air Support of Operational Maneuver Groups), *Przeglad Wojsk Lotniczych i Wojsk OPK*, July-August 1982.

NATO Handbook, NATO Information Service, Brussels, 1985.

NATO's Fifteen Nations, Special Issue No. 2, 1981.

Odom, Lt. Gen. William E., "Soviet Force Posture: Dilemmas and Directions," *Problems of Communism*, July-August 1985.

Oesterreichische Militaerische Zeitschrift, February 1985 and May 1985.

Podkowa, T., "Ugrupowanie OW w skladzie ladowo-powietrznym" (The Combat Grouping of an Air-Land Advanced Detachment), *Przeglad Wojsk Ladowych*, April 1983.

Poirier, Maj. R. G., and Maj. A. Z. Conner, "Soviet Strategic Reserves: The Forgotten Dimension," *Military Review*, November 1983.

Pokrovskiy, Col. Gen. A., "Na yugozapadnom napravlenii" (On the Southwestern Direction), *Voyenno-istoricheskiy zhurnal*, April 1978.

Radio Liberty Daily Bulletin, RL415/84, Munich, October 26, 1984.

Radziyevskiy, Army Gen. A. I., *Taktika v boyevykh primerakh. Diviziya* (Tactics in Military Examples. Division), Voyennoye Izdatel'stvo, Moscow, 1976.

-----, *Tankovyy udar* (Tank Assault), Voyennoye Izdatel'stvo, Moscow, 1977.

-----, (ed.), *Armeyskiye operatsii* (Army Operations), Voyennoye Izdatel'stvo, Moscow, 1977.

Reznichenko, Lt. Gen. V. G., *Taktika* (Tactics), Voyennoye Izdatel'stvo, Moscow, 1984.

Rodnikovskiy, Yu., "Reyd parashutno-desantnogo batal'ona v tylu protivnika" (Raid by a Parachute Assault Landing Battalion in the Enemy's Rear), *Voyennyy vestnik*, August 1978.

Rogers, Gen. Bernard W., "Follow-On Forces Attack (FOFA): Myths and Realities," *NATO Review*, No. 6, December 1984.

Rokossovskiy, Marshal of the Soviet Union K. K., *Soldatskiy dolg* (A Soldier's Duty), Voyennoye Izdatel'stvo, Moscow, 1968.

Sadykiewicz, Michael, "Soviet Far East High Command: A New Developmental Factor in the USSR Military Strategy Toward East Asia," in *The Soviet Union and East Asia in the 1980s*, edited by Jae Kyu Park and Joseph M. Ha, Kyungnam University, Seoul, 1983.

-----, *Die Sowjetische Militaerdoktrin und Strategie* (Soviet Military Doctrine and Strategy), Bernard & Graefe Verlag, Koblenz, 1985.

-----, *Wartime Missions of the Polish Internal Front*, N-2401-1-OSD, The RAND Corporation, Santa Monica, Calif., July 1986.

Schulz-Torge, Ulrich-Joachim, "The Soviet Military High Command," *Military Technology*, Part I, August 1985, and Part II, September 1985.

-----, "Das sowjetische Militaer unter Michail S. Gorbatschow" (The Soviet Military Under Mikhail S. Gorbachev), *WT*, No. 12, December 1986.

Scott, Harriest Fast, and William F. Scott, *The Armed Forces of the USSR*, 2d ed., Westview Press, Boulder, Colo., 1981.

Senger und Etterlin, Gen. Dr. Ferdinand von, "Defence of Central Europe. The Challenge of the 1980s," *NATO's Fifteen Nations*, Special Issue No. 2, 1981.

Shervais, Capt. Stephen, Jr., "'Forward Detachments' and the Soviet Nuclear Offensive," *Military Review*, April 1979.

Sovetskaya voyennaya entsiklopediya (Soviet Military Encyclopedia), Voyennoye Izdatel'stvo, Moscow, 1976-1980.

Soviet Military Power 1985, U.S. Department of Defense, U.S. Government Printing Office, Washington, D.C., April 1985.

Soviet Military Power 1986, U.S. Department of Defense, U.S. Government Printing Office, Washington, D.C., March 1986.

Soviet Military Power 1987, U.S. Department of Defense, U.S. Government Printing Office, Washington, D.C., March 1987.

Starry, Gen. (USA) Donn A., "The Principles of War," *Military Review*, September 1981.

Sullivan, Jack, and Maj. Tom Symonds, "Soviet Theaters, High Commands and Commanders," U.S. Department of the Air Force, Headquarters Air Force Intelligence Service, Fort Meade, Maryland, March 14, 1986.

Suvorov, Viktor, *Inside the Soviet Army*, Hamish Hamilton, London, 1982.

-----, "Spetsnaz: The Soviet Union Special Forces," *Military Review*, March 1984.

-----, *Inside Soviet Military Intelligence*, Macmillan, New York, 1984.

-----, "Strategic Command and Control: The Soviet Approach," *International Defense Review*, No. 12, 1984.

Sverdlov, F. D., *Peredovyye otryady v boyu* (Forward Detachments in Combat), Voyennoye Izdatel'stvo, Moscow, 1986.

Timokhovich, Col. I. V., *Operativnoye iskusstvo sovetskikh VVS v velikoy otechestvennoy voyne* (The Operational Art of the Soviet Air Force in the Great Patriotic War), Voyennoye Izdatel'stvo, Moscow, 1976.

Urban, Mark L., "Major Reorganization of Soviet Air Forces," *International Defense Review*, No. 6, 1983.

U.S. Army Armor Center, *Organization and Equipment of the Soviet Army*, ST-30-20, Fort Knox, Ky., January 1981.

U.S. Department of the Army, Headquarters, *Opposing Forces Europe*, FM 30-102, Washington, D.C., November 18, 1977.

U.S. Department of the Army, Headquarters, *Operations*, FM 100-5, Washington, D.C., August 20, 1982.

U.S. Army Training and Doctrine Command, *Soviet Army Operations and Tactics*, FM 100-2-1 (TBP FY84), Coordinating Draft, August 1982, U.S. Government Printing Office, Washington, D.C., 1984.

U.S. Army Training and Doctrine Command, *Soviet Army Specialized Warfare and Rear Area Support*, FM 100-2-2 (TBP FY84), Coordinating Draft, August 1982, U.S. Government Printing Office, Washington, D.C., 1984.

U.S. Department of Defense, Defense Intelligence Agency, *Handbook on Soviet Armed Forces*, DDB-2680-40-78, Washington, D.C., 1978.

U.S. Department of Defense, Defense Intelligence Agency, DDB-2610-36-81, May 1981.

U.S. Department of Defense, Defense Intelligence Agency, *Soviet Front Fire Support*, DDB-1130-8-82, September 1982.

Velikaya otechestvennaya voyna Sovetskogo Soyuza (The Great Patriotic War of the Soviet Union), Voyennoye Izdatel'stvo, Moscow, 1967.

Vigor, Peter W., and Christopher Donnelly, "The Manchurian Campaign and Its Relevance to Modern Strategy," *Comparative Strategy*, February 1980.

Villahermosa, G., "Soviet Enveloping Detachments," *Armor*, September-October 1984.

Vorob'yev, I., "Forward Detachments in Offensive Operations and Battles," *Voyennaya mysl'*, in *Selected Readings from "Military Thought, 1963-1973,"* Vol. 5, Part 1.

Voyennyy entsiklopedicheskiy slovar' (Military Encyclopedic Dictionary), 2d ed., Voyennoye Izdatel'stvo, Moscow, 1986.

Warner, Edward L., III, Josephine J. Bonan, and Erma F. Packman, *Key Personnel and Organizations of the Soviet Military High Command*, N-2567-AF, The RAND Corporation, April 1987.

Wielemba, Lt. Col. W., and Capt. Z. Moszumanski, "Strzelanie z czolgow ogniem posrednim" (Indirect Tank Fire), *Przeglad Wojsk Ladowych*, March 1984.

Wojcik, Col. Dr. Teofil, "Trudna sztuka dowodzenia" (The Difficult Art of Command and Control), *Zolnierz Wolnosci*, No. 90, 1983.

Yakubovskiy, I., "Na proskurovsko-chernigovskom napravlenii" (On the Proskurov-Chernigov Direction), *Voyenno-istoricheskiy zhurnal*, No. 4, 1969.

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