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Following on pages 4 through 121 is a paper entitled "Warsaw Pact Exercises." The paper provides an in-depth study of long-term and short-term planning, preparation, operation and evaluation of Warsaw Pact exercises. Included in the paper is an explanation of the purpose and nature of each exercise series.

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WARSAW PACT EXERCISES

TABLE OF CONTENTS

I. THE LONG-TERM PLANNING PROCESS FOR TRAINING EXERCISES . . . 6

 A. THE JOINT ENTERPRISE PLAN AS THE BASIS FOR PROGRAM DIRECTIVES 6

 B. TRAINING DIRECTIVES OF THE SOVIET MINISTRY OF DEFENSE 7

 C. COMBINED ARMED FORCES TRAINING DIRECTIVES 10

II. THE VARIOUS EXERCISE SERIES 13

 A. LARGE-SCALE EXERCISES 13

 B. PURPOSE AND NATURE OF EACH EXERCISE 14

 1. TRAINING OF GENERAL STAFFS 14

 2. "GRANIT" EXERCISES 16

 3. "ZAPAD" EXERCISES 17

 4. "SOYUZ" EXERCISES 19

 5. "SH'CHIT" EXERCISES 20

 6. TRAINING OF TECHNICAL COMMUNICATIONS TROOPS . . . 21

 7. "TRANZYT" EXERCISES 22

 8. "VOLNA" EXERCISES 23

 9. "LATO" OR "WIOSNA" EXERCISES 23

 10. JOINT, MULTI-NATIONAL AIR DEFENSE EXERCISES . . . 25

 11. POLISH-SOVIET DIVISION-LEVEL EXERCISES 26

 12. JOINT CIVIL DEFENSE EXERCISES 27

III. THE EXERCISE PLANNING AND PREPARATION PROCESS 28

 A. NSWP EXERCISE PLANNING METHODS 28

5
4
3
2
1

5
4
3
2
1

B. PRE-EXERCISE PLANNING PHASE 29

C. EXERCISE PLANNING ELEMENTS 31

D. PARTICIPANTS IN PREPARATION OF EXERCISES 34

E. PLANNING RESPONSIBILITIES (WHO DID WHAT?) 37

F. EXERCISE PARTICIPANTS 50

G. SOVIET-POLISH INTERACTION IN EXERCISE PLANNING 53

H. TRAINING AREAS (SELECTION AND PREPARATION) 54

I. "OPERATIONAL CAMOUFLAGE" OF EXERCISES 55

IV. UNDERSTANDING EXERCISE SCENARIOS 59

 A. ESTABLISHED DOCTRINE VERSUS NEW CONCEPTS 59

 B. SCENARIO CONTENT 60

 C. EXERCISES AS A REFLECTION OF REALITY 63

 D. TESTING OF NEW IDEAS DURING EXERCISES 69

 E. ENEMY (NATO) DATA IN EXERCISES 70

V. ORGANIZATION AND METHODS OF DIRECTING LARGE EXERCISES . . 74

VI. EVALUATION OF EXERCISES 89

VII. WESTERN VIEWS OF PACT EXERCISES 98

ANNEX 1: GENERAL STRUCTURE OF WARSAW PACT OPERATIONAL TRAINING 115

ANNEX 2: DIAGRAM OF CONVERSION OF POLISH COMMAND SYSTEM FROM PEACE TO WAR 118

ANNEX 3: CONCEPTUAL DIAGRAM: DATA FLOW IN "LATO" TYPE EXERCISES 119

ANNEX 4: DIAGRAM OF DEPLOYMENT OF ROLE-PLAYING GROUPS IN FRONT-LEVEL EXERCISES (TRADITIONAL SOVIET METHOD) . . 120

ANNEX-5: DIAGRAM OF DEPLOYMENT OF ROLE-PLAYING GROUPS IN FRONT-LEVEL EXERCISES (NEW POLISH METHOD). 121

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WARSAW PACT EXERCISES

I. THE LONG-TERM PLANNING PROCESS FOR TRAINING EXERCISES

A. THE JOINT ENTERPRISE PLAN AS THE BASIS FOR PROGRAM DIRECTIVES.¹

The Joint Enterprise Plan was developed routinely by the military leadership of the Soviet Union, which centrally managed the military activities of the Warsaw Pact states. The legal basis for this state of affairs was formulated by the Combined Armed Forces' (CAF) Peacetime Statute, which authorized the Pact Commander-in-Chief (CINC) to issue directives concerning the combat readiness of the CAF, as well as their operational and combat training. The statute also authorized the CINC to prescribe the CAF's annual joint enterprises (exercises, war games, training, school briefings, etc.).

Based officially on the above premises, all exercise activities of the armed forces assigned by the individual Warsaw Pact states to the CAF were initiated and coordinated by the CAF CINC. In practice--at first informally, and then formally following acceptance of the CAF Wartime Statute in 1980--the CINC issued exercise central directives, guidelines and plans of the Ministry of Defense of the USSR.

As a result, the joint exercise plan came into being on two levels of the central management of the Warsaw Pact States' military preparedness: the Soviet Ministry of Defense and the Combined Command of the Warsaw Pact.

The Ministry of Defense of the USSR, which was the highest level at which directives were initiated, issued:

- The long-term program of training activities, with its most important component, "The Principles of Frequency of Exercises of the main Branches of Armed Forces and Their Respective Elements."
- The main tasks relating to operational and combat training of commands, staffs and troops.

¹ The Warsaw Pact Joint Enterprise Plan consisted of a schedule of all joint exercises (Combined Armed Forces; front-level; army-level; air defense; naval; rear services). The plan also included scheduled meetings/"common undertakings" (Pact Military Council; Chiefs of the General Staff; Chiefs of Intelligence; Heads of branches of arms and services).

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- Orders or organizational guidelines for the technical training of the particular branches of the armed forces, and arms of troops and services.

On the second level of command, the CAF CINC, as the First Deputy Minister of Defense of the USSR responsible for carrying out the above-mentioned directives of the Soviet Ministry of Defense, also tailored these directives to the conditions and needs of the Warsaw Pact armed forces and annually issued:

- A Directive of the CINC of the Combined Armed Forces for the Training of Combined Armed Forces.
- A Plan of Joint Enterprises of the Combined Armed Forces.

B. TRAINING DIRECTIVES OF THE SOVIET MINISTRY OF DEFENSE.

The origin of these directives in the Soviet Ministry of Defense is unclear. One such directive appeared in January 1981 during consultations between the General Staff of the Soviet Armed Forces and the Chief of the General Staff of the Polish Armed Forces.

1. The Long-Term² Program of Training Activities originated with the General Staff of the Soviet Armed Forces, in cooperation with the chiefs of the main branches of the Soviet armed forces, and was approved by the Soviet Minister of Defense. In the Soviet General Staff, this document was compiled by the Training Directorate of the Main Operational Directorate. The idea behind this document was the establishment of a permanent system of exercises which would be compulsory for a longer term, and which would insure appropriate preparation of the commands, staffs and troops of all the branches of the armed forces for wartime operations.

In principle, this program did not specify any aims or content of exercises, but merely listed their types and numbers in annual, two- and five-year cycles. From the part of this program presented by the Soviets during bilateral consultations it appeared that, independently of the exercises organized and conducted by the central level (Soviet Ministry of Defense), commanders in the military districts, in the Groups of Soviet Forces (stationed outside the USSR) and in the fleets were responsible each year for the conduct of:

² Not precisely defined.

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- One command-and-staff Front (army-level) exercise.³
- One army (corps)-level operational-tactic 1 exercise involving the use of troops (annually with one army or one army corps).³
- Two to four army (corps) command and staff exercises in the field, with such armies (corps) which did not take part in the operational-tactical exercises. These exercises involved the use of troops.⁴
- One operational command-staff exercise with air forces or air defense forces, with the participation of an air army and antiaircraft troops.
- One exercise involving rear echelon security (or of the technical specialist type).
- One staff training exercise in the field.
- Two to four tactical exercises (division-level), with the use of troops (or tactical staff exercises).

Every two years:

- One command-staff exercise with the participation of the commanders and staffs of wartime military districts, together with a mobilization exercise and a separate civil defense exercise.
- One experimental (research) exercise following the guidelines of the General Staff or commands of branches of the armed forces.

Experience from the 1960s and 1970s demonstrated that the system of exercises established by the Soviet Ministry of Defense was implemented within the Warsaw Pact in a rather "flexible" fashion. Exercises included in the annual "Joint Enterprise Plan of the CAF" were fully implemented, as were those organized and directed by the Soviets (the Ministry of Defense of the USSR,

³ The stated level of each exercise (front-, army- etc.) indicated the highest headquarters involved.

⁴ There were no minimum or maximum levels of troop participation; an exercise was considered "with troops" if any elements other than command and staff components and command post support deployed.

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General Staff of the Soviet Armed Forces or the Combined Command of the CAF), as well as those of national commands.

In general, the national commands took into consideration economic factors (expenses) and other elements (for instance, lack of sufficiently large training areas), and conducted either a lesser number of exercises or limited their size and/or the scale of involved forces and means or the duration, etc. For example, in Poland during the period 1969-1981, instead of one front-level exercise per year as stipulated by the Soviet side, a rule was established to plan such an exercise once every two years. Further, the frequency of the organization and conduct of army- and division-level exercises of ground and air forces was reduced, almost by fifty percent from norms postulated by the Soviet Ministry of Defense.

The Polish General Staff worked toward the goal of having each Polish division participate in the same number of exercises over a five-year period. In practice, this goal was not achieved; such factors as the role of a division in the war plan (first echelon), the special skills of a division (e.g., river crossing), or geographical location (near the exercise training area; near a Soviet unit, etc.) dictated that some Polish divisions exercised more often than others.

2. The Main Tasks Relating to the Training of Commands, Staffs, and Troops were defined in the "Training Order of the Minister of Defense of the USSR," issued once every two years. In the years in which the "Order" did not appear, "Directive Guidelines of the Minister of Defense of the USSR" were issued. Both the "Order" and the "Directive Guidelines" were prepared by the Training Directorate of the Main Directorate for Operations of the General Staff of the Soviet Armed Forces, in cooperation with the other departments of this staff and with input from the commands of the main branches of the armed forces, and arms of troops and services of the Soviet armed forces.

a. The Training Order of the Minister of Defense of the USSR (approximately 20-25 pages) provided an evaluation of the training tasks for the preceding period and set forth new tasks. These tasks were formulated in categories such as what should be achieved in certain areas: politico-moral state, combat and mobilization readiness, as well as operational and combat preparedness of the various armed forces' branches and arms of troops and services.

Among the attachments to the order was: "A Calendar Plan of the Most Important Training Enterprises of the Soviet Armed Forces" for one year, and an orientation plan for the following year. Another attached document described technical-materiel norms prescribed to ensure the implementation of these endeavors.

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b. The Directive Guidelines of the Minister of Defense of the USSR usually were much shorter, and contained only a current, very general estimate of the implementation of the tasks set forth in the Order of the Minister of Defense of the USSR. These guidelines confirmed the necessity of consistent implementation of the tasks in the forthcoming year, and also introduced additional requirements or new tasks.

Attached to this directive was also a copy of the "Calendar Plan of the Most Important Training Enterprises" for the given year.

3. Orders and Organizational Guidelines for the Technical Training of the Main Branches of Armed Forces and Arms of Troops and Services were issued for each year by the Soviet Minister of Defense. In principle, these guidelines "fleshed out" detailed training tasks contained in the order or the "Directive Guidelines" of the Soviet Minister of Defense. Orders and organizational guidelines were coordinated with the General Staff of the Soviet Armed Forces prior to publication.

C. COMBINED ARMED FORCES TRAINING DIRECTIVES.⁵

Theoretically, all training documents, including plans of exercises of the Combined Armed Forces of Warsaw Pact States, were formulated by the military organs of the Pact, i.e., by the staff of the CAF. In practice, despite a large degree of independence possessed by the CAF CINC in this case, the Training Directive of the CAF CINC and the CAF's Joint Enterprise Plan were formulated on the basis of the above-mentioned training documents of the Soviet Ministry of Defense.

Since the training documents of the Soviet Ministry of Defense and of the Combined Command were issued at about the same time (normally in October/November of each year), a method of so-called "parallel work" was widely used in the preparation of this CAF document. The success of this method depended on the working relationship between the Soviet chiefs of the planning cells of the staff of the Combined Armed Forces and the respective chiefs of the planning cells of the Soviet Ministry of Defense, as well as on the ability to elicit oral planning information from these sources, working versions of orders, or directives of the Soviet Ministry of Defense. In addition, these same sources provided technical guidance for the training of specific branches of the armed forces, and arms of troops and services.

⁵ See Annex 1: General Structure of Warsaw Pact Operational Training.

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The training documents of the Warsaw Pact, including CAF exercise plans, did not receive formal approval from the Soviet Minister of Defense. Nonetheless, their working versions, before being approved by the CAF CINC, were coordinated with the chiefs of all important organizations which participated in the planning of training of the Soviet Armed Forces. These chiefs formally initialled these plans, tentatively agreeing with their contents.

On the staff of the Combined Armed Forces, all activities which involved preparation, coordination and publication of the CINC CAF directive concerning operational and combat training of the CAF and the Joint Enterprise Plan were coordinated by the Chief of the Directorate for Operations, the Deputy Chief of Staff of CAF for Operational Matters.

In the preparation of these documents, the following elements took part:

- The Training Department of the Directorate for Operations (as the leading and executive element).
- Appointed representatives of nearly all organizational elements of the CAF staff, including:
 - Combat Readiness and Command Department units
 - Directorates of:
 - o reconnaissance
 - o air defense and antiaircraft troops
 - o air force
 - o navy
 - o rear echelons
 - o rocket and artillery troops
 - o engineering troops
 - o chemical troops
 - o communications

In the activities of the CAF Staff, there were four discernible phases:

In the First Phase, which began each year after the Spring Session of the CAF Military Council (April/May), all participants of the CAF Staff planning process worked on the so called "inserts" to the Directive of CINC CAF. These "inserts" were provided via working levels to the Chief of the Directorate for Operations of the CAF Staff, and were based on the working-level data from the Soviet MOD and participants' awareness of the situation in the Warsaw Pact armed forces (such as conclusions from exercises, inspections, and controls).

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In the Second Phase, which lasted through the months of May-August, designated functional personnel of the Directorate for Operations (most frequently the chiefs of Western and Southwestern Theater axes, under the personal supervision of the Chief of the Directorate for Operations, the CAF Deputy Chief of Staff), prepared initial drafts of the CINC CAF Directive and the Joint Enterprise Plan of the CAF, based on the various inputs. Both documents, after initial approval of the CAF Chief of Staff, were coordinated with the Chief of the Main Directorate for Operations of the General Staff of the Soviet Armed Forces, as well as with the chiefs of interested operational directorates of the main branches of the armed forces, and of arms of troops and services.

In the Third Phase, which usually occurred around September/October, applicable portions of the CINC CAF Directive--already agreed upon within the framework of the Soviet Ministry of Defense--as well as relevant segments of the Joint Enterprise Plan of the CAF were sent by the CAF Chief of Staff to the respective national commands for agreement. Comments submitted by national commands, if they were acceptable to the Soviet side, were inserted into the draft text of the above-named documents. If such comments were not acceptable, the Soviet side negotiated until it reached "an agreement of views" on all points, still before the final discussion of the plans and before formal review of the training plans for the forthcoming year by the CAF Military Council.

The Fourth Phase routinely took place during the Fall session of the CAF Military Council (October/November). At this time, the Military Council studied the training aspects of CAF, including the Joint Enterprise Plan, for the following year and approved appropriate recommendations about the exercises and training. During this meeting, after discussing training matters, the CAF CINC formally signed the Directive and the Joint Enterprise Plan. These documents then were transmitted by the Council secretariat to the respective representatives of the national armed forces for implementation.

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II. THE VARIOUS EXERCISE SERIES

A. LARGE-SCALE EXERCISES

In the 1970s and early 1980s, the following series of large exercises were conducted within the framework of the training command organs and operational units (echelons of army size).

- Training for the general staffs of the armies of the Warsaw Pact, without any code names announced to member-states.
- Exercise of the Warsaw Pact's Unified Air Defense System [conducted under the code name of "GRANIT" (Granite)].
- Strategic-operational command and staff exercises in the field, with communications means and participation of all branches of the armed forces [conducted under the code name of "ZAPAD" (West)].
- Strategic-operational command and staff exercises in the field, with communications means and (after 1980) also with actual participation of allied land forces, air defense, air forces and naval elements [conducted under the code name of "SOYUZ" (Union)].
- Maneuvers conducted generally on the territory of one (sometimes two) Warsaw Pact states, with actual participation of designated units of all armed forces of the Warsaw Pact [conducted under the code name of "SH'CHIT" (Shield)].
- Technical exercises of communications troops of the CAF.
- Technical exercises of rear echelons of the CAF [conducted under the code name of "TRANZYT" (Transit)].
- Technical exercises of allied navies [conducted under the code name "VOLNA" (Wave)].
- Command and staff front exercises, but including two or three lower echelons of organization, with the use of means of communications, and with armed forces of varied size which were recommended to the particular national forces to be conducted with designated staffs (and on occasion, with forces) of the Soviet Army. In this category, cryptonyms or code names were assigned by the national commands which conducted the exercise. In Poland, these were usually exercises of the "LATO" (Summer) or "WIOSNA" (Spring) type.

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- Joint training exercises of neighboring corps (armies, divisions) or air defense elements of Warsaw Pact States (with actual flights and simulated air targets). These training exercises had no assigned code names.
- Joint tactical exercises at division level, with forces of Soviet and national divisions (usually one armored or one mechanized division, plus support forces for each side). Code names were assigned by the national command conducting the exercises. In Poland, if the given exercise was organized by the Soviet side, it carried the code name "DRUZHBA" (Friendship). Exercises organized and conducted by the Polish side were named in accordance with the prescribed key designated for the forces of particular divisions and specific military district. Thus, for example, exercises in which the Silesian Military District participated were named after predatory animals, i.e., "RYS" (Lynx), "JENOT" (Pacoon), "ZBIK" (Wildcat), etc. Exercises involving Warsaw Military District divisions were named after trees, i.e., "BRZOZA" (birch), "KLOH" (maple), etc. Beginning in the early 1980s, such exercises carried the code name "DRUZHBA" (Friendship), regardless of who prepared them.
- Joint civil defense exercises of national border regions (provinces, voivodes) along the neighboring Warsaw Pact states. Such exercises were not given any code names.

B. PURPOSE AND NATURE OF EACH EXERCISE

The aims of each exercise were formulated separately during its detailed planning and preparation. Nonetheless, in general, the specific, repetitive types of exercises were similar in nature and served similar aims.

1. Training of General Staffs⁶ of the allied armies was chiefly designed to improve the strategic command functioning of the Warsaw Pact under the political and military leadership of the USSR. In the Warsaw Pact training system, such exercises appeared for the first time in the second half of the 1970s. By late 1981, only three such exercises had taken place. All three were organized and managed by the General Staff of the Soviet Armed Forces. The CAF headquarters and staff played a dual role, serving as various leadership assistance organs for the exercise

⁶ The GDR "General" staff was called the "Main" staff, because the Germans were not permitted to have a General Staff.

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and also as operational training groups for the commanders of the Western and Southwestern Theaters of Military Operations.

The Soviet side revealed neither the aims nor the content of these exercises to the NSWP states. There also were no publications or any general assessments on this subject. It was known, however, from the contents of the exercise training data (fragmentary; separate for each national army), as well as from the discussions at military meetings of the Warsaw Pact organs that all of these exercises were conducted for two main purposes:

a. Verification of the then-new Soviet concept of strategic command and management of war operations in the European theater of war for the Theaters of Military Operations.

b. Implementation of the new system of conversion of the Combined Armed Forces from peacetime to wartime, conversion from a three-step to a four-step system of combat readiness of the armed forces and the commencement of the implementation of the integrated management system to achieve higher levels of combat readiness [a system code-named "MONUMENT" (Monument)].

Conforming to the routine applied by the Soviets in all training endeavors, exercises combined within themselves either the existing or planned elements of military solutions (concepts) as stipulated, or simply a planned deception. Thus, an accepted premise in all these exercises was that data concerning military capabilities of the Warsaw Pact were altered to a lesser or greater degree, and reflected only varying degrees of reality. Distorted information included data about names and numerical designations of operational, tactical and other units, their numerical strength, armaments and equipment, combat and mobilization readiness, deployment plans and war supplies, as well as operational plans regarding the use of the armed forces. On the other hand, all procedures and solutions concerning the deployment of the wartime systems of strategic command in the European Theater of War, as well as the methods of conversion of the CAF from peacetime to wartime strictly followed the rules which the Soviets intended to introduce in the early 1980s.

All training exercises of the general staff were subjected to a strict regime of protection of classified information which encompassed, inter alia:

- Extreme limitations on the number of participants in the exercise (in principle, only the most important functional personnel of the general staffs, commands and

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staffs of National Air Defense and the Navy).

- Strict controls on the use of means of communication during an exercise (generally, radio silence).
- Employment of a closed-circle exercise method (game play within a narrow group of people in buildings which were specially designated for this purpose, as well as restriction to the minimum of routine methods of command by use of technical means).
- Departure from the classical procedure of critique of the exercise with the participants about its purpose, theme, content and conclusion.
- Increased counterintelligence security.

The exercises of the general staffs of the Warsaw Pact allied armies will probably continue. In the forthcoming years, exercise themes might focus on the improvement of the strategic leadership system for the management of conversion of the Combined Armed Forces from peacetime to wartime and the strategic development of these forces in the European war theater, by the Supreme Soviet Command. It should not be excluded that, as new concepts in this respect crystallize, they could well be subjected to verification and improvement during these exercises.

2. Exercises of the Unified Warsaw Pact Air Defense System [GRANIT] (Granite) Types.

The unified air defense system exercises of the Warsaw Pact states (code named "GRANIT"), conducted irregularly, have taken place since the creation of this system in 1969, and subsequent separate agreements and detailed plans have been worked out regarding the implementation of this system between the USSR and the specific non-Soviet Warsaw Pact (NSWP) states. The organizer and the manager of these types of exercises was always the Commander-in-chief of the Air Defense Forces of the USSR, who simultaneously held the position of Deputy Commander-in-chief of the Combined Armed Forces for Air Defense matters of the Warsaw Pact States. The main objective of these exercises was the coordinated interaction of Warsaw Pact air defense forces and means in countering mass air attacks by NATO. For the Soviet side, an equal (if not always announced) purpose was the successive initiation of national commands into the integration of their national air defense forces into the command of Soviet Air Defense. Based on the experiences of those exercises, in the late 1970s the Warsaw Pact approved resolutions which foresaw that in wartime all NSWP national air defense forces, means and equipment will be subordinated to the CINCs of the Combined Armed

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Forces in the Theaters of Military Operations.

The "GRANIT" exercises involved nearly all peacetime air defense forces of Warsaw Pact states (generally without a mobilizational increase), as well as some air and antiaircraft defense troops of the remaining branches of armed forces (ground forces, air forces and navy) foreseen for the operations in the unified air defense system of Warsaw Pact states.

"GRANIT" exercise scenarios hypothetically posed the most probable variants of the possible activities of a NATO air attack countered, with some exceptions, by the actual means and forces of the Warsaw Pact states, acting in accordance with actual air defense plans. The exceptions involved chiefly the electronics frequencies reserved for wartime and the use of means and forces of hidden radar assets designated for wartime use only.

"GRANIT" exercises included elements which were played by applying actual flights to simulated targets, with the practical operations of air defense. Actual flights of targets were, in principle, used to verify the so-called "tightness of the air defense" of the various Warsaw Pact states.

The most frequent forms of operational camouflage/deception in GRANIT exercises were: limited radio communications, use of back-up frequencies, deployment of means and forces of the air defense (especially electronic) at alternate positions, and deployment of simulated air defense targets.

3. Operational-Strategic Command and Staff Exercises With Means of Communication in the Field and With Participation of Designated Forces of All Branches of Armed Forces, Under the Cryptonym "ZAPAD" (WEST).

Exercises with the cryptonym "ZAPAD" were organized and conducted by the Soviet Defense Ministry. As of the end of 1981 there had been only two "ZAPAD" exercises, and they differed from each other so much that one should really speak of two different types of exercises under the same cryptonym. The first exercise was conducted in May 1977 on the territories of the USSR, Poland, Czechoslovakia and the German Democratic Republic (GDR). The commands, staffs and designated units of the Soviet armed forces (from the Group of Soviet Forces in Germany and the western military districts of the USSR), as well as armed forces of

7 The extent of Romanian participation in the "GRANIT" exercises is not known. Romania did not agree to the transfer of the national armed forces to the Soviet command, and did not sign any agreements to this effect.

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Poland, Czechoslovakia and the GDR took part.

The second "ZAPAD" exercise was conducted in September 1981 exclusively on Soviet territory. The only participants were Soviet armed forces (most likely from the Baltic and Belorussian military districts), the Soviet Baltic Fleet, and Soviet Strategic Rocket Forces. From the NSWP armed forces, delegations of leaders of the respective defense ministries were invited as observers; no NSWP troops took part.

The purpose of the first "ZAPAD" exercise in 1977 was to test the new concept of management by the Soviet Supreme High Command and the commanders of the Theaters of Military Operations, the strategic deployment of Warsaw Pact forces for war and the conduct by these forces of offensive engagements in the Western Theater of Military Operations. Conclusions drawn from this exercise subsequently helped the Soviets to force through, in the Warsaw Pact forum, the new wartime command structure.

The aims of the second "ZAPAD" exercise in 1981 were not clear. From fragmentary information, it appeared that the more important aims could have been:

- Testing of the newest weapons systems and equipment of the Soviet armed forces; and development of recommendations for further technical improvement by the Soviet armaments industry, based on conclusions drawn from this exercise.⁸
- Testing of new concepts of conducting offensive operations in the Theaters of Military Operations using Operational Maneuver Groups (OMGs).
- Testing of new experimental organizational structures for the armed forces (among others, a corps acting as an OMG).

Exercise "ZAPAD-77", which had the character of an operational exercise with a limited contingent of armed forces, involved chiefly commands, staffs and their communications and security elements, with only a small number of combat units. ZAPAD-81, however, resembled a classic two-sided military maneuver and involved, in addition to commands, staffs and their communications and support units, large-scale combat units of all branches of the armed forces, including SS-20 missile units. (Source Comment:

⁸ The existence of such an aim was suggested by the presence of a large number of representatives of the Soviet armaments industry, whom Defense Minister Ustinov saddled with technical-construction and production tasks.

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"ZAPAD-81" involved a total of well over 100,000 troops--possibly as many as 150,000.)

4. Operational-Strategic Command and Staff Exercises
["SOYUZ" (Union)] with Deployed Communications.

"SOYUZ" exercises, organized and conducted by the CAF CINC, appeared at the beginning of the 1970s and subsequently underwent a marked evolution. At the outset, these were only command-and-staff map exercises in which a limited number of participants from one to two Warsaw Pact states took part. (Usually, participants consisted only of the higher command and staff cadres assigned to wartime fronts, ground forces, air forces, and commands of National Air Defense and the Navy fleets.) As time went by, these exercises became multi-level (front, army, division and brigade), with means of communications in the field, involving as participants nearly full commands and staffs of the echelons mentioned above, as well as their communications and support units. At the end of 1980, these exercises took on the character of military maneuvers with mass participation of combat units: ground forces, air forces, air defense and allied navies.

In general, the main aim of "SOYUZ" exercises was the up-grading of commands, staffs and armed forces in the conduct of offensive operations by Pact forces in the Theaters of Military Operations. In the framework of this generally defined aim, many specific goals connected with the implementation of new operational concepts were implemented. These were, inter alia, the conduct of air and air defense operations in the Theaters of Military Operations, the use of OMGs for the deployment of successful operations into the depth of enemy territory, the study of operational and combat results, and the application by Pact and NATO forces of new weapons systems and equipment. In each "SOYUZ" exercise, routine command and staff training in nuclear strikes was conducted.

At the beginning of the 1980s, the operational contents of "SOYUZ" exercises were placed on the back burner while the chief aim of the exercise became military intimidation of Poland. Under cover of the "SOYUZ-80" exercise, the Soviet Union prepared an operation to introduce some 15 Pact divisions into Poland. After suspension of this objective, there were overt, demonstrative movements of Soviet and Polish troops in Poland under the cover of the succeeding "SOYUZ-81" exercise. These movements were intended to frighten the Polish population and to support the Polish national authorities.

In sum, one could say that the main aim of "SOYUZ" exercises was (and probably remains) the preparation of the higher echelons of Warsaw Pact commands for the conduct of offensive operations

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in the Theaters of Military Operations. In exceptional instances, "SOYUZ" exercises also serve as a show of force, to camouflage introduction of Warsaw Pact forces into the territory of an allied state, and finally, very likely to conceal a strategic deployment of armed forces for war.

5. Armed Forces Maneuvers Under the Cryptonym "SH'CHIT" (Shield).

"SH'CHIT" exercises, conducted since the middle of the 1960s, were the sole training undertakings of the Warsaw Pact in which, in a single operational area (usually on the territory of one, and only as an exception, on the territory of two states), contingents of all seven national armed forces of the Warsaw Pact were engaged. It was very important to the Soviets that each Warsaw Pact state's armed forces be at least represented by one command and staff element at the operational level (army or corps), and by one tactical unit (division or brigade), even if at reduced strength. Thus, even in "SH'CHIT" exercises in the Western Theater of Military Operations, Soviet, Polish, Czechoslovak and East German divisions were joined by Bulgarian, Romanian and Hungarian contingents.

Theoretically, the organizer and the manager of the "SH'CHIT" exercise was the minister of defense of the state in which the exercise took place. In practice, however, nearly all aspects of this exercise were prepared by the CAF staff.

Although it was difficult to question certain training aims of the "SH'CHIT" exercises, it was generally accepted among the military circles of the Warsaw Pact that these exercises were, in effect, political-propaganda demonstrations of the unity of power and combat effectiveness of the Warsaw Pact.

The complete "SH'CHIT" maneuvers consisted of separate show-episodes of exemplary combat activities of the armed forces. Most frequently, such prepared demonstrations were:

- Preparation of the departure area for an offensive operation.
- Breakthrough of a prepared enemy defense (with live fire and aircraft bombardment).
- Crossings of wide waterways by a variety of methods.
- Conduct of the first massive nuclear strike.
- Elimination of the effects caused by strikes involving weapons of mass destruction.

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- Repelling of counter-strikes and pursuit of a retreating enemy.
- Tactical airborne drops.
- Sea landing operations.
- Reinforcement of seized lines.

The "SH'CHIT" maneuvers took place according to a well-worn stereotype. After deployment to their training areas, during the first few days of the exercise the staffs and troops exercised within the limits of a designated episode of activities. After thorough preparation, the actual exhibition took place. During the maneuvers, selected representatives of the Warsaw Pact troops also had propaganda meetings with the local civilian population. At the conclusion, a rally of "friendship and brotherhood of arms" took place, along with a parade of the troops.

Observers from Western countries were invited to some "SH'CHIT" exercises. These observers were shown, however, a fictional scenario, prepared especially for their consumption. This scenario differed from the real one in that the offensive character of the military activities was hidden from the foreign observers, and aspects of defense were emphasized instead.

6. Exercises and Training of the Technical Communication Troops.

Exercises and technical training of the communication troops, in comparison with other types of educational undertakings of the Warsaw Pact, were conducted frequently. Such exercises varied widely. Among the largest undertakings of this type were the complex technical exercises of communications troops conducted on the scale of the Theater of Military Operations. A typical example of such undertakings, conducted under the management of the Chief of Staff of the Polish Armed Forces, was "WIOSNA-1969" (Spring-1969). This exercise included participation of the staffs and communications troops of:

- Group of Soviet Forces in Germany
- The Northern Group of Soviet Armed Forces (Poland)
- The Central Group of Soviet Armed Forces (Czechoslovakia)
- Polish Armed Forces
- Czechoslovak People's Army

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- National People's Army of the German Democratic Republic.

Other undertakings of this type were:

- Communications training of the general (main) staffs of the Warsaw Pact.
- Training connected with the takeover of international civilian communication facilities of the Warsaw Pact states for war needs of the CAF.
- Complex communications training of the air defense forces of the Warsaw Pact states.
- Communications training of the allied fleets in the Baltic and Black Seas.

Despite the fact that operational staff groups (and at times even entire staffs) participated in all the communications undertakings, operational content was generally relegated to the back burner, and often was even totally omitted. The chief aim and content of these exercises involved the upgrading of the technical functioning of command communications, and collaboration under conditions of conventional or nuclear war, as well as during a conflict in which the enemy would employ electronic warfare on a mass scale.

7. Technical Exercises of CAF Rear Echelons [Cryptonym "TRANZYT" (TRANSIT)].

"TRANZYT" exercises were organized by the CAF staff and conducted by the CAF CINC. Their main purpose was the upgrading of the transportation, technical, materiel and medical support for the mass movement of the Soviet forces through the territory of the Warsaw Pact states to the military operations regions, as well as upgrading of the methods for the uninterrupted logistical support of these forces.

Lengthy preparations for these exercises, as well as the exercises themselves, were used by the CAF command to justify the construction or upgrading of various infrastructure installations of the Theaters of Military Operations by (and at the expense of) the allied armed forces. The more significant investments with which the national armed forces were saddled by the CAF command in the framework of these exercises were, inter alia:

- Bringing the strategic rail and road lines up to required technical norms.

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- Construction of loading and unloading points at railway junctions.
- Construction of rail and road access routes for reserve and alternate waterway crossings.
- Construction or modernization of bridges.
- Upgrading of border crossings, as well as permanent and temporary (backup) transloading areas.

8. Technical Exercise of Allied Fleets in the Baltic, ["VOLNA" (Wave)].

"VOLNA" exercises constituted sea maneuvers of a sort. They were organized by the CAF staff and directed by the CAF CINC. Their main purposes were to improve the cooperation of three allied fleets (Soviet, Polish and GDR) in the conduct of common operations aimed at the destruction of NATO naval forces in the area of the Danish straits and Western Baltic, the landing of operational troops on the Danish Islands and the deployment of Pact naval forces into the North Sea to support ground forces in the operational maritime sector.

"VOLNA" exercises were usually marked by the largest number of ships, aircraft and shore units of all three fleets. In addition to naval forces, ground force units earmarked in operational plans for action as the integral part of landing forces also took part, along with air defense and frontal aviation elements. Exercise landing operations were usually conducted at coastal sites in Poland and East Germany.

9. Frontal, Multi-Level Command and Staff Exercises With Deployed Communications, ["LATO" or "WIOSNA" (Summer or Spring)].

In the non-Soviet states of the Warsaw Pact which in wartime would assign front-sized armed forces against NATO, this type of exercise was considered the most important annual or biannual national training undertaking. Such exercises were prepared and organized by the national general staffs, but directed by the ministers of national defense. These exercises were conducted in conformity with the "Plan of Joint Enterprises of the CAF". In addition to NSWP forces, Soviet staffs and troops also took part, and were operationally subordinated to the exercising fronts.

In the Polish armed forces, the main purpose of the "LATO" exercise was the training of commands and staffs of the operational level in the conduct of offensive operations with the employment of conventional and nuclear weapons in a variety of operational sectors of the Western Theater of Military

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Operations. In the framework of the main purpose, depending on requirements, a rather large number (usually 7-10) of specific aims of verification, upgrading, research, etc., was programmed.

In the "LATO" or "WIOSNA" frontal exercises of the Polish Armed Forces, in addition to the national forces, an operational group of a combined-arms or tank army from the USSR's Belorussian Military District also took part.⁹ Occasionally, for a specified time during the exercise, an air army from the Soviet Northern Group of Forces would be subordinated to the Polish Front. Polish national forces which routinely took part were:

- Command and staff elements of the front (normally at full wartime strength).
- Commands and staffs of combined-arms armies (normally at full wartime strength).
- Command and staff elements of the National Air Defense Forces (in limited numbers), and commands and staff of one or two National Air Defense corps.
- Command and staff elements of the Polish Navy.
- Wartime command elements of the military districts.

Depending on specifically assigned missions, so-called "designated troops," also were assigned, e.g.:

- Front-level brigade of operational-tactical missiles (in limited strength).
- Within one combined-arms army, one mechanized division (limited strength).
- From the remaining combined-arms armies, their organic brigades of operational-tactical missiles (limited strength) and one division staff, as well as some divisional unit (at times, for instance, a tactical missile unit; at other times, a divisional engineer battalion).
- From an air army, perhaps a staff of an air division and

⁹ This Soviet operational group normally consisted of 25-30 personnel, including the army commander, the army's chief of staff, the chief of operations from the army's staff, various chiefs of the arms and services of the army, and support personnel (commo, etc.).

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an aircraft maintenance/ground support battalion.

- Various units of the National Territorial Defense Forces, central and district groups of direction and control of military movements, engineering brigades, chemical defense forces, etc.

For the purpose of camouflage deception of the exercise--especially in creating fictional networks and field communications--a large number of communications units of the National Territorial Defense were employed.

"LATO" or "WIOSNA" exercises did not reflect actual operational plans. In order to camouflage the planned sector of activities, time of entry into battle, the direction of the main thrust of strikes, immediate and subsequent missions, as well as other elements of the operational plan, the Polish Front exercised in three strategic directions:

- Northern maritime (Neubrandenburg, Stenabruck, Brussels).
- Central (Leipzig, Frankfurt A/M).
- Southern (Dresden, Stuttgart).

In the first case, the distortions from the actual operational plans were the smallest. In this case, certain elements of the exercise did reflect, at times, actual plans rather closely (e.g., crossing of the KIEL Canal, airborne and sea landings on the SJELLAND Island, and others).

In "LATO" or "WIOSNA" exercises, the newest Soviet operational concepts were implemented. Also, a so-called "perspective model of actions" was introduced, based on the premise that Pact forces, as well as the forces of NATO, have at their disposal weapons systems and equipment planned to be introduced into the field somewhere between five to seven years in the future.

10. Common Training for Joint Operations by Neighboring Corps (Armies, Divisions) of the National Air Defense Elements of The Warsaw Pact.

This type of training, conducted in the Western Theater of Military Operations and with the participation of various elements of designated air defense units of the USSR, Poland, Czechoslovakia and East Germany, took place 2-3 times a year. It usually was organized and directed by the Deputy Air Defense Commander of the Warsaw Pact. The main purpose of these exercises was to improve the interaction of the neighboring air

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defense systems in countering NATO air strikes in the border areas where national responsibilities met. The training was based on actual air defense plans and procedures.

11. Joint Tactical Divisional Level Exercises Involving Soviet and NSWP troops. (Usually One Tank or One Mechanized Division, Including Support and Backup Troops, for each Side).

One such exercise took place in Poland each year. These exercises were organized and directed by the Commander of the USSR's Northern Group of Forces or the Commander of the Polish military district whose division took part in the exercise, with responsibility alternating annually.

The main purpose of these exercises was the upgrading of joint operations in the conduct of common tactical tasks. In such exercises, there existed a rather sharp national rivalry. The Soviets and Poles each wanted to show their best sides, and this led to the point where the exercise often became unrealistic, with performance directed in advance and rehearsed repeatedly before the actual exercise took place. As a result, these types of exercises did not reflect realistic operational plans; instead, they were of a propaganda character, with TV coverage and articles and pictures in the press.

From the perspective of the Polish General Staff, once an exercise was designated as a division-level exercise with troops, it was considered to be in that category, regardless of the percentage of the division's personnel and equipment which took part. In fact, over the nearly two decades (1963-1981) of the author's intimate involvement in the preparation and management of Polish and Warsaw Pact exercises, he was never aware of any division-level FTX involving 100 percent of a division's personnel or equipment. During that period, each division-level FTX involved at least 50 percent of the Polish division's assigned personnel and equipment and, in most cases, the personnel and equipment percentages ranged between 60 and 90 percent. There were no fixed minimum or maximum percentage levels for division-level FTXs; the degree of participation depended on many factors, e.g., scenario requirements; the author of the exercise. The final decision as to which and how many divisional elements actually would participate rested with the commander of the Polish military district from which the exercising division came.

Poland had difficulty in staging division-level FTXs. Such exercises involved alert (conversion to wartime status), force movements and widespread exercise play, and Poland basically lacked the large training areas and financial resources to support such exercises.

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12. Joint Civil Defense Exercises in the Areas Bordering on a Neighboring Warsaw Pact State.

In the early 1980s this type of exercise was not yet widespread; they took place rarely, and in principle only on a bilateral basis with the Soviets on one side and one NSWP state on the other. Their official main purposes were the improvement of joint civil defense operations and the conduct of joint tasks, especially assignments for redeployment of forces and clean-up of the results of nuclear strikes in border transloading areas. In practice, the purposes were somewhat broader and aimed also at strengthening the authority of the Soviet Combined Command for coordination of civil defense undertakings in the Warsaw Pact countries.

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III. THE EXERCISE PLANNING AND PREPARATION PROCESS.

A. WERE THE METHODS OF EXERCISE PLANNING IDENTICAL IN ALL WARSAW PACT STATES? IF THERE WERE DIFFERENCES, WHAT WERE THEY BASED ON?

Organization and exercise planning (preparation) methods in specific Warsaw Pact states were, in general, very similar in their main aspects; however, in implementation, there were significant differences.

The guiding principles generally used by all organizers of exercises were:

- Recognition and implementation of the principle that the commander and staff organizing the exercise are the responsible entities.
- Entrusting the preparation of an exercise to specialized operational elements (directorates or departments) or operational-training elements, which formed the so-called "compact authors' teams."
- Supplementing the "compact authors' teams" with specialists from various fields, as required.
- Limiting the number of people preparing the exercise to an absolute minimum, and limiting the dissemination of information about the exercise in such a way that the participants in the exercise planning would know only those aspects which were essential to their specific technical expertise.
- Enforcing the principle of stages of work, with a preference for the method "from generalities to detail". In practice, it meant that the "Leading Thought" of the exercise was developed in the first stage of the formulation, which consisted of the exercise's general meritorical and organizational framework. In succeeding stages of planning, this framework was fleshed out.¹⁰
- Preparation of the main documentary foundations of the exercises, based on Soviet examples such as the "Leading Thought," "Intentions of Both Sides," and the "Plan of Conduct of the Exercise."

¹⁰ See pages 26-27 for more detail on the components of a "Leading Thought."

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Individual, markedly differentiated approaches could be noted in such instances as:

- The degree of direct involvement in the planning (preparation) of the exercises by the responsible commander and his staff, as well as their influence upon the formulation of the content of these exercises.
- The degree of freedom given to the authors' teams in the planning-preparation process of the exercise.
- The degree of flexibility in the approach to the required principles of operational art and tactics, as well as the requirements of the field manuals.
- The number of personnel participating in the planning and the methods of their work.
- Procedures for review and approval of the plans.
- Timing for the planning-preparation process for specific exercises.

B. HOW LONG BEFORE EXERCISES DID PLANNING BEGIN?

Warsaw Pact exercise authorities had no uniform rules about the time needed for the planning-preparation process of exercises. The only requirement which drove the organizers of the allied training (mainly the Ministers of National Defense of the Warsaw Pact states, with the exception of the Soviet Defense Minister), was the deadline for submission of the "Intentions of Both Sides" and the Plan of Conduct of the Exercise" to the CAF CINC. This deadline was usually one month before the exercise was to begin.

In general, the period of time used for the planning and preparation of specific exercises differed considerably and depended largely on the type of the exercise and the following fundamental factors:

- Scale (strategic, strategic-operational, operational, operational-tactical).
- Planned organization and methods of implementation (national or coalition; one- or two-sided; single or multilevel; with or without command elements and means of communications; with or without participation of troops; CPX or FTX).

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- Number and type of aims (upgrading, coordination among command organs, demonstrations, experience, testing, etc.).

Other important factors were the national characteristics of the organizers of an exercise, as well as the style of work, organizational talents of commanders and the areas of knowledge-ability of the authors' teams.

On the basis of the experience of the 1970s and 1980s, one could consider that the planning-preparation time for specific exercises was:

1. In the Polish People's Republic, where primary importance was placed on the initiative of the authors' team and the leadership role was limited to becoming acquainted with the exercise's documentation, the average time was:

- Twelve to eighteen months for exercises of the "KRAJ"(Country) type.
- Eight to ten months for a frontal exercise of the "LATO"(Summer) type.
- Three months for a technical exercise of communications forces.
- Four to five months for an army exercise with the participation of the troops.
- Two to three months for a tactical divisional exercise involving the use of troops.

2. On the CAF Staff, where everything was regulated by the order of the CINC and the role of the authors' teams was reduced chiefly to a timely and proper implementation of the orders, the planning-preparation process was significantly shorter than in Poland. "SOYUZ" exercises were prepared at the CAF in barely three to four months, as were "TRANZYT" and "FALA" exercises.

The above periods applied in normal, routine cases. In exceptional situations, especially those dictated by politico-military considerations, the time period involved in the preparation of specific exercises could be of much shorter duration. (For instance, "SOYUZ-81" supposedly was prepared in less than two weeks.) In another case, in 1968, the author of this study was a personal witness when, just before the entry of Warsaw Pact forces into Czechoslovakia, an operational group of the staff at Legnica, Poland, prepared and implemented a technical communications exercise of the Warsaw Pact under the,

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cryptonym "EFIR-68"¹¹ by the order of the CAF CINC, Soviet Marshal YAKUBOVSKY, in barely three days.

C. WHAT DID PLANNING AND PREPARATION OF AN EXERCISE INCLUDE?

According to the Soviet school of thought, accepted and complied with by the NSWP states, the planning and preparation process of an exercise consists of:

- Preparation of the so-called "Leading Thought" of the exercise.
- Detailed preparation of the planned course of conduct.
- Preparation of documentation and materials for the umpire teams and the role-playing groups.
- Preparation of detailed control plans, verification and research.
- Preparation of the exercise critique.

1. Preparation of the "Leading Thought" was generally considered to be most important element of the exercise planning process. The "Leading Thought" was basically the general concept of the exercise, and consisted of:

- Definition of the theme of the exercise.
- Definition of its main purpose and additional aims (upgrading, verification, research, etc.).
- Selection of the participants of the exercise and definition of the armaments and equipment which should be at their disposal.
- Definition of the time frame, duration and the methods of conduct of the exercise.

¹¹ Exercise "EFIR" was conducted in the final phase of the preparations for the armed intervention of the Warsaw Pact forces in Czechoslovakia. In the framework of this exercise, a heavy net of radio and radio link communications was set up around the borders of Czechoslovakia, with the purpose of achieving two goals:

- Demonstration of large concentration of Warsaw Pact forces against which the Czech Army would have no chance in combat, thus depriving the leaders of that country of any realistic option for successful armed resistance.
- Deception about the directions of activities of the intervention forces.

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- Selection of the areas (locations) for the exercise.
- Definition of the methods and means for the operational camouflage of the exercise.
- Preparation of the so-called "Intentions of Both Sides."
- Definition of the framework of the plan for the conduct of the exercise.

"Intentions of Both Sides" constituted a framework for the operational content of the exercise. These were prepared in graphic form on a map, supplemented with a legend. On the map were, inter alia:

- Positions of both sides (NATO and Pact) before the exercise. Most frequently, there was a presentation of the location of the forces of both sides before, or at the moment of the outbreak of hostilities.
- Sectors of action, main directions of strikes, and the tasks of friendly and enemy forces.
- Concepts of the use of mass-destruction weapons by both sides.
- An outline of the exercise's operational development.
- Applied and actual locations of command posts of the exercising levels.
- Mathematical presentation of the qualitative-quantitative relations between friendly and enemy forces in different operational areas, and in various phases of the operation.

The legend, prepared in the form of text and tables, usually presented the origins of the war and a description of specific stages and phases of its development, with emphasis upon the situation of exercising units.

2. Detailed, meritorical preparation of an exercise. This usually took place after the exercise manager formally approved the "Leading Thought" of the exercise, although the detailed, meritorical preparation could take place simultaneously with the formulation of the "Leading Thought" in instances when exercise developers were pressed for time. This work consisted of:

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a. Graphic presentation on maps for each day of activities, and at times even for specific episodes of the dynamics of operational conduct. This presentation included:

- (1) Enemy order of battle.
- (2) Order of battle of key elements of friendly operational and combat groupings.
- (3) Depictions of friendly and enemy losses.
- (4) Description of friendly reserves of technical supplies (ammunition, rockets, bombs, fuel, medicines, spare parts, etc.).

b. Preparation, generally in the form of tables, of a plan to transmit information.

c. Description (in a form of assumptions or general notes) of the ground, air and naval situations, and also the technical situation in the fields of reconnaissance, electronic warfare, communications, artillery and rocket troops, antiaircraft defense, defense against weapons of mass destruction, operational camouflage, engineering, and technical and quartermaster rear services.

d. Definition and a graphic presentation of optimal decisions of those participating in the exercise, with rationale (generally in the form of the qualitative-quantitative relations of forces).

3. Preparation of documentation and materials for the umpire teams and role-playing groups involved chiefly the study of relevant extracts of the plan of the course of the exercise for specific functional persons, as well as a review of detailed plans of the exercise dynamics and the Information Dissemination Plan.

4. Preparation of detailed control plans, verification and research was based on the general premises of the "Leading Thought." Normally this preparation phase was not done by teams of authors, but by technical elements within the TO & E structure, such as the "Inspectorate of the Armed Forces," mobilization, or scientific-research elements, etc.

5. Study of the critique (discussion) of the exercise was based on the preparation of its introductory, rather theoretical content, which would be subsequently developed and improved daily during the course of the exercise.

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D. WHICH OFFICES AND PERSONS TOOK PART IN THE PREPARATION OF THE EXERCISES?

Preparation of the exercises routinely was the responsibility of the operational TO & E elements of the level which organized the exercise:

- In the General Staff of the Soviet Armed Forces- the Main Directorate of Operations.
- In the Staff of the CAF of the Warsaw Pact- the Directorate of Operations.
- On the level of the Ministry of Defense, the military districts and branches of the armed forces respectively, preparation was done by the directorates or branches of operations of these organizations, staffs of military districts or staffs of the armed forces' branches.

In all operational directorates and departments were TO & E training elements which were specifically responsible for planning and preparation of exercises. If an operational directorate or department had no training element, the directorate or department was nevertheless responsible for supervision of the preparation of exercises. This, for instance, was the case in the Polish General Staff, where the Operational Training Department functioned independently, outside of the Directorate of Operations. This separate department planned and prepared all exercises, operating largely independently, under the general supervision of the Directorate of Operations.

The extent of involvement of other activities and persons (outside of operational elements) depended on the character of the exercise in question and the stage of its work in the planning (preparation).

In certain states of the Warsaw Pact, e.g., in the Polish People's Republic and the German Democratic Republic, these issues were regulated separately for each exercise by a detailed organizational directive of the chief of staff of the management of the exercise. The directive designated specific offices and people responsible for the preparation of the exercise.

In Poland, the following offices and personnel normally took part in the studies and preparation of front exercises of the "LATO" (Summer) type.

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In the initial stage of the work, while formulating the "Leading Thought":

- Seven to ten officers from the Operational Training Department of the Polish General Staff, as the so-called "compact authors' team."
- One or two officers/intelligence specialists from the Intelligence Directorate (Z.II.) of the Polish General Staff.
- Five to seven support personnel (draftsmen; typists).

in the early period of time when this group had no specialists assigned from the National Air Defense, Air Forces and Navy, the authors' team was augmented by a representative from each of these armed forces branches. In this stage of work, the authors' team took advantage of consultations of specialists (if necessary) from the fields of combat readiness, mobilization, automated command and control, communications, electronic warfare, nuclear and chemical warfare, technical and quartermaster rears, operational camouflage and others. These consultants (frequently officers from the Directorate of Operations of the Polish General Staff) were not included in the work on the concept of the exercise; they only presented their views regarding aspects of interest to the authors' team.

In the second stage of the work, as the detailed, preparation of an exercise gained momentum, the number of organizational links and people directly involved in the detailed preparation of the training increased to several tens and, at times, exceeded 100.

Normally, aside from the compact authors' team, i.e. people who took part in the formulation of the "Leading Thought," the detailed planning phase included:

- All remaining functional personnel from the Operational Training Division (in toto: 13-16 officers and 7-10 support personnel).
- 10-15 officers from the Directorate of Operations of the Polish General Staff, including specialists from the fields of operational planning, command, combat readiness, national air defense, air forces, navy, operational camouflage, electronic warfare, direction and control of armed forces movements, territorial defense of the country and meteorology.

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- 3-4 officers from the Intelligence Directorate (Z.II) of the Polish General Staff.
- 2-4 officers from the Directorate of Organizational Structures (Z.IV).
- 10 to 15 officers from the Directorate of Mobilization (Z.X).
- 2-3 officers from the Directorate of Automated Command and Control (Z.XIV).
- 10 to 15 officers from the Directorate of Normative Administration (Z.XI).
- 2-3 officers from the Main Political Directorate.
- 5 to 7 officers from organizations subordinated to the Chief Inspector of the Country's Territorial Defense.
- 10-15 officers from the Main Quartermaster Headquarters of the Polish Armed Forces.
- 5 to 7 officers from organizations subordinated to the Chief Technical Inspector (in principle, from the Staff of Technical Services).
- 5 to 7 officers from the Headquarters of Signal Troops.
- 1-2 officers from the Office of the Chief of Rocket Troops and Artillery Headquarters.
- 1-2 officers from Antiaircraft Defense Troops Headquarters.
- 1-2 officers from the Chemical Troops Headquarters.
- 1-2 officers from the Engineering Troops Headquarters.
- 1-2 officers from the Personnel Department of the Ministry of Defense.
- 1-2 officers from the Headquarters of the Military Internal Service.
- 4-5 officers from the Support Units' Grouping of the Ministry of National Defense.

The number of support personnel (draftsmen; topographers; typists) reached at times up to 150-200.

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On the Staff of the Combined Armed Forces of Warsaw Pact States in Moscow, the number of people taking part in the preparation of the exercises was significantly lower than in Poland. From the information available to the author on this subject it appeared that these numbers, for specific training exercises, were:

- "SOYUZ" - 25-30 officers,
- "TRANZYT"- 15-20 officers,
- "FALA" - 15-20 officers.

C. WHAT DID THE SPECIFIC OFFICES AND PEOPLE DO? TO WHAT EXTENT DID THEY HAVE A FREE HAND AND FLEXIBILITY? WHO REVIEWED AND APPROVED PLANS?

Such questions can be answered by an examination of a typical front exercise, organized and planned by the Ministry of National Defense of the Polish People's Republic. In this respect, the Polish experience was somewhere between the Soviet, German and Romanian methods.¹²

In the Polish People's Republic, the Minister of National Defense (as the manager of the exercise) and the Chief of the General Staff (as the chief of staff for exercise management) normally did not become directly involved in exercise planning. They also did not provide any general exercise directives. Until the completion of the planning work, their role was limited to occasional remarks at meetings, briefings, or collegial gatherings. These remarks pertained to various ideas of threat from the NATO side and the need for finding counter-measures, all of which became parts of the minutes of these meetings and which were transmitted to the authors of the exercise for implementation.

The Polish Minister of National Defense and the Chief of the Polish General Staff were not, however, only passive consumers of what eventually was planned by the actual authors of an exercise. During the review and the approval of exercise plans,

¹² In 1976-80, the General Staff of the Polish Armed Forces introduced studies intended to increase the effectiveness of organization and planning of large exercises. In the framework of these studies, the researchers learned about solutions used by the National People's Army of the GDR, the Armed Forces of Romania and the CAF Staff. Some of these experiences were incorporated into the Polish system and applied in the 1970s and early 1980s.

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they were deeply involved in the details, frequently demanding additions and development of certain parts of the exercise. They were also in most cases the authors of certain new concepts and ideas which were then included in the already completed plans as supplements.

The situation looked entirely different in the GDR, in the CAF Staff in Moscow and in Romania. From the data about this subject which were accessible it appears that in the GDR, the Minister of National Defense personally involved himself in the planning work from the very first stages. He frequently visited the exercise planning center of the Directorate of Operations of the Main Staff of the German National Army where he would listen, at the working level, to various proposals of the authors' team and approve them on the spot. The frequent presence of the minister at the planning center was, however, in the view of German participants in the planning process, more of a ceremonial nature, and did not involve the contribution of any new concepts introduced into the plans.

In the CAF Staff in Moscow, the CINC and the Chief of Staff considered themselves to be the actual authors of the exercise. Accordingly, they viewed the authors' team which prepared the exercises as mere implementors of their decisions. In this respect they issued, via service channels, numerous and detailed directives for exercise planning. These directives were then implemented with rigor, especially by the CAF Chief of Staff. The concepts of the CINC and the Chief of Staff were not especially brilliant; they were rather limited and sketchy, restricting the initiative of the authors' team which planned an exercise.

Still another approach to planning was apparent within the leadership of the Romanian Ministry of National Defense. From the data which trickled from the Romanian General Staff, it appeared clearly that the chief concerns of that leadership were matters of confirmation, in each exercise, of the independence of the national Romanian commands from the Soviet CAF Command of the Warsaw Pact states. Emphasizing this aspect of the exercise plans, the Romanian Minister of National Defense and the Chief of the Romanian General Staff delegated to the lower-level authors' teams nearly total freedom in the formulation of the operational postulates of the exercises.

In frontal exercises of the "LATO" type in Poland, the highest person exercising direct, working-level supervision on behalf of the Ministry of National Defense was the Deputy Chief of the General Staff of the Polish Forces for Operational Matters. Preparation of an exercise was, however, within the authority of the Chief of the Operational Training Division of

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the Polish General Staff.¹³ This general officer had in principle a nearly free hand, and great flexibility in planning. He was required, however, to justify and defend the meritorical and organizational concept of the exercise, submitting them through channels to the Polish Minister of National Defense. For the purpose of preparing an exercise, he had at his disposal:

- His T&O unit, representing a so-called "compact team of authors," including 13-16 officers as well as a sizeable group of generals and technical officers attached to assist this team.

1. The "compact team of authors" included the following personnel:

a. Chief author of the exercise, who could in some cases be the chief of the Operational Training Department, or one of his most experienced deputies. The chief author personally prepared the exercise's "Leading Thought" and the most important plans for its conduct, being assisted by the remaining members of the team and technical specialists from various fields. The chief author also sometimes prepared a critique for the Chief of Staff of the exercise leadership group. As a rule, he also participated in the preparation of the critique for the chief of the exercise.

b. Chief of the Organizational Group, who could be a deputy of the department chief, or any other senior officer of the department. This officer, in cooperation with the chief author, prepared an organizational concept of support for the work of the exercise leadership, including a plan of development and work for the leadership of the exercise; a plan of development of simulation, player-groups in the field, umpires, etc; and a technical-materiel plan to support the exercise (housing, messing facilities, uniform supplies, means of transportation, etc.).

c. Senior officers of the author's team were responsible for the preparation of the specific features of the central exercise plan, e.g., the main and secondary premises, exercise operational plans, exercise alert plans, plans for the conduct of the exercise, plan for dissemination of information, etc.

¹³ Preparation of comparable exercises in the CAF and in the Main Staff of the German People's Army in the GDR was within the authority of the Deputies of the Chiefs of Staff for Operational Matters, who were simultaneously the Chiefs of Operational Directorates of these staffs.

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2. Specific Central Institutions of the Ministry of National Defense--either organizational cells or functional personnel representing these activities--engaged in the following tasks in support of the compact team of authors:

a. Operational Directorate (I) of the General Staff:

- Consultation and participation in the preparation of operational problematics (selection of exercise areas, definition of the front's action segment, its short- and long-range tasks, operational timing, limits on the use of weapons of mass destruction, etc.), as well as assistance in the preparation of exercise operational plans.
- Consultation and assistance in the planning of the development required by the wartime command system of the exercise, exercise conversion of commands and staffs from peacetime to wartime, and the development of electronic warfare systems.
- Consultation and assistance in the planning of the development required by the exercise system of directing and controlling of the movement of troops and meteorological problematics.

Independently from the above-cited issues, Directorate I routinely prepared a realistic operational camouflage plan for "LATO" exercises, as well as a plan for control of combat readiness.

The operational camouflage plan included the conduct of electronic camouflage of the exercise [generally under the code-name "ELEKTRON" (Electron)], devised to mislead NATO as to the purpose and content of the exercise. The plan of control of combat readiness simply spelled out the complex control of the combat readiness of those who participated in the exercise.

b. Intelligence Directorate (II) of the General Staff of the Polish Armed Forces (PAF):

- Consultation and assistance in the formulation of premises concerning armed activities of NATO.
- Consultations and assistance in the formulation of the premises concerning the activities of front reconnaissance elements and the use of special purpose forces.

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c. Organizational Directorate (VI) of the General Staff of PAF:

- Independent preparation of experimental organizational structures of units for the purposes of testing during the exercise.
- Independent preparation of the composition of front forces of the exercise and exercise numbering system of units. (Source Comment: This material had to conform to the instructions and requirements of the exercise's chief author.)

d. Mobilization, Replacement and Military Service Directorate (X) of the Polish General Staff:

- Independent preparation of a plan for calling up reserve personnel for exercises. (Again, conforming to the exercise author's requirements.)
- Independent preparation of a mobilization plan for the development of designated units taking part in the exercise.
- Consultation and assistance in the formulation of premises for the functioning of the exercise system of replacement of war losses.
- Assistance in the formulation of the premises for exercise conversion of the armed forces from peacetime to wartime.

e. Directorate of Automation of Command Systems (XIV) of the Polish General Staff:

- Computerized services as required by the authors' team.
- Independent preparation--within the exercise author's guidelines--of a plan to assure computer services for the management of the exercise and the exercising commands and staffs.

f. Directorate of Normative Administration (XI) of the General Staff of the Polish Armed Forces:

- Preparation of the documents (in agreement with the chief author of the exercise) of secret command, such as code tables, simplified

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numerical code tables, etc.

- Assistance in the preparation of the organizational concept of assuring administrative support for the work of the exercise management, such as security, transportation, housing and messing.

g. Main Political Directorate of the Polish Armed Forces:

- Independent preparation of a plan (based on the general exercise background) for the support of relevant Party, political and propaganda aspects.
- Independent preparation of premises for the development of special wartime propaganda for the front during the exercise.

h. Organizations Subordinated to the Chief Inspector of the Territorial Defense of the Country:

- In accordance with the instructions of the chief author of the exercise, preparation of assumptions concerning the development and use of territorial defense units for the exercise, as well as units of internal defense and civil defense elements.

i. The Main Quartermaster Headquarters of the Polish Armed Forces:

- Elaboration of the assumptions concerning quartermaster support for the operations of the front (providing supplies of fuels and oils, medical, food, clothing, as well as complex transportation and evacuation means).
- Elaboration, in agreement with the chief author of the exercise and with a representative of organizations subordinated to the Chief Technical Inspector, of the assumptions concerning supplies of ammunition for the front forces (prepositioning and delivery).
- Elaboration, in coordination with a representative of the Quartermaster of Communications Troops (Signal Troops), of the assumptions concerning development of a training-type command system for the rear of the front and the rear of the territory of the country.

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j. Organizations Subordinate to the Chief Technical Inspector (in Principle, the Staff of Technical Services):

- Preparation of the assumption to ensure adequate technical support for the operations of the front (supplies of missiles and evacuation and maintenance of armament and electronic and armored equipment, as well as equipment for artillery, aircraft and antiaircraft defense, communications, engineering and chemical warfare).

k. Headquarters of Signal Troops:

- Preparation of the plans for the development of the training-type and actual command posts and communications systems.
- Independent preparation of directives concerning the agreed system for the use of radio and radio-link means.
- Preparation, in coordination with Directorate I of the General Staff, of the technical radio-electronic concept for the operational camouflage of the "LATO" front exercise.

l. Headquarters of the Rocket Troops and Artillery:

- Preparation of the premises concerning the use of rocket troops and artillery.

m. Antiaircraft Defense Troops Headquarters:

- Preparation in coordination with air defense and air force specialists of the premises for the use of antiaircraft defense troops.

n. Chemical Troops Headquarters:

- Consultation and participation in the formulation of premises concerning the use of mass destruction weapons--both by NATO and friendly forces--as well as post-strike analysis.

o. Headquarters of Engineer Troops:

- Consultation and preparation of the premises related to the provision of engineering support for the operations of the front.

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p. Personnel (Cadre) Department of the Ministry of National Defense:

- Independent preparation of personnel aspects, based on the operational concept of the exercise. This work consisted of preparation of a special list of officers selected to assume higher command or staff positions in the near future at the level of front, army or branch of the armed forces. In addition, this department prepared a plan for periodic inclusion of these officers into exercises for the purpose of verification of their command and staff abilities.

q. Headquarters of the Military Internal Service:

- Independent preparation, based on the general information about the exercise, of a counterintelligence plan to provide security for the exercise. Also, this headquarters prepared a plan for the control of radio traffic used by the management of the exercise, as well as by commanders, staffs and forces undergoing training.

r. Command of the Support Units Grouping of the Ministry of National Defense:

- Provide housing, messing, security and services for the leadership of the exercise, based on the directives of the chief of the organizational group.

Representatives of all Central Institutions of the Ministry of National Defense who were assigned to assist the exercise authors were subordinated to the Chief of Operational Training for the duration of exercise planning. With very few exceptions, they were not allowed to keep their TO&E commanders (or chiefs) informed, since the latter often subsequently participated as players in the exercise.

Planning work was, in principle, conducted exclusively in specially designated and equipped buildings of the General Staff of the Polish Armed Forces. This "Exercise Planning Center" (Centrum Planowania Cwiczen) featured displays with multi-use maps with overlays and back lighting:

- In 1:1,000,000 scale (for preparation of the graphics of the "Intentions of Both Sides").
- In 1:500,000 scale (for the preparation of the aphics of

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the dynamics for each day of exercise).

- In 1:200,000 scale (for the graphic presentation of especially important episodes of the exercise).

In addition, there were map displays of the so-called "information bank," which contained detailed data concerning actual dispositions and defense infrastructure of NATO and Pact forces in the Western Theater of Military Operations.

No auxiliary material which contained any actual information concerning Pact defense (war) plans or military potential could be kept at the Center. This included such data as composition of forces, numerical designations of units and their level of combat and mobilization readiness, as well as the more important operational systems, such as command, combat readiness and mobilization, etc.

All of the above-mentioned real data had to be appropriately changed and sanitized before being included in the exercise plans. This was accomplished, in conformance with the general purpose of an exercise, by the appropriate Central Institution of the Ministry of National Defense and then provided for the use of the authors' team. Thus, front composition of forces and exercise numerical designations of units were prepared by the Organizational Directorate (VI) of the General Staff, at the request of the chief author of the exercise and in conformance with his requirements and proposals. Exercise alert signals and exercise alert regions, also in conformance with the needs of the authors' team, were prepared by Department VI of Operational Directorate I of the General Staff. These exercise-type studies were provided to the Exercise Planning Center, where they were incorporated into the "information bank" and used for planning.

Planning of an exercise was conducted according to a graphic schedule prepared in advance and approved by the leadership of the General Staff. This graphic schedule described the duties of those responsible, as well as deadlines for completion and submission for approval.

In the Polish situation, there was a tendency to develop a great deal of initiative at the working level of the participants of the exercise. The chief author and the specialists from various fields who assisted him could (and were even expected to) introduce new ideas in the scenario of the exercise, departing from well-known stereotypes of operational and tactical art. They were not allowed, however, to violate the canons of politico-strategic character. Thus, in formulating a scenario for the genesis of war in Europe, the side which initiated an armed conflict always had to be NATO. An equally important and

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immutable canon which had to be included in the content of each exercise was the premise that, after the first border skirmishes, during which the opponent could succeed locally (the depth of penetration could, however, not exceed 40-50 kilometers), the armed forces of the Warsaw Pact had to commence offensive operations on the first, or at the latest, on the second day of war (a so-called Korean variant). At the operational-tactical level (front; army), the content of the exercise could only be offensive operations. In the 1960s, it was unthinkable for the scenario to envision the front moving to a defense posture with forces larger than one division. Subsequently, in the 1970s, it was allowable to include a temporary situation in which the front moved to a defense posture with forces of one army. Such a situation could not, however, last longer than one to two days. Passing from conventional to nuclear warfare always had to be initiated by NATO. Such initiation by NATO could be depicted by NATO's limited use of nuclear weapons or by NATO's direct preparation for use of such weapons.

In the premises of the exercises, the authors were also required to consider the so-called "operational-tactical norms", which were mandatory in the Warsaw Pact at that time. These pertained to the following topics:

- ~~Speed and timing for deployment of forces.~~
- The width of the operational sector of the front, army and division.
- The depth of front- and army-size operations.
- The depth of daily operations; the immediate and subsequent tasks of division, army and front.
- Tempo of an offensive.
- Density (per kilometer) and saturation (of specific units) with tanks and artillery in breakthrough sectors.
- Limits of nuclear and chemical weapons designated for operations.
- Limits of air and artillery support, etc.

From the experiences of the 1960s and 1970s, it appeared that there were considerable differences among Warsaw Pact states in the approach to these subjects. In the Soviet training system, the authors of exercises had no opportunity to ignore, or perhaps they did not want to violate, mandatory norms. Thus, if in a given time frame the mandatory tempo of redeployment of

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forces called for 300-350 kilometers per day, then this parameter had to be reflected as well in the tasks which were assigned to the exercising units (for instance, "redeploy 350 kilometers in one day"), since in the subsequent conduct of the operations it was assumed that forces fulfilled these tasks (e.g., redeployed no less than 350 kilometers per day).

In the Polish system of training, authors of exercises were chiefly required to formulate tasks for the armed forces which were in agreement with operational-tactical norms of tasks. In the conduct of the exercise operations, however, they had considerable freedom in creating any possible premises which could have been caused by countermeasures of the enemy. In practice, for instance, the result was that in the event of redeployment, the exercising elements had to receive their redeployment tasks at the rate of 300-350 km/day, while the authors of the exercise could simultaneously create such difficulties (and they did this frequently), e.g., air attacks by NATO forces, destruction of bridges, laying of mines by air, actions by diversionary-reconnaissance units, etc. that even when those who were exercising did their utmost, it was impossible for them to achieve the established tempo. In the Polish case, it was not unusual for the authors of the exercise to assume in advance that in practice forces could redeploy only at a rate of 200-250 km/day.

Theoretically, such an approach served to illustrate difficulties in the future field of combat, as well as to train commanders and staffs in extremely unfavorable situations. In practice, however, it really meant questioning of the often unrealistic (in the view of the Polish commanders) Soviet tactical-operational norms.

Concrete planning factors which the authors of the exercise had to take into consideration were the then "fashionable" strategic development trends and operational art and tactics-- NATO's as well as the Pact's. In addition, the training directives which stemmed from the directives of the CAF CINC and the orders of the Minister of National Defense had to be taken into consideration. In the exercises, it was also advisable to consider war experiences--chiefly the Soviet experiences from World War II, but also experiences from "local wars," especially the Vietnam and Arab-Israeli conflicts.

In general, the authors of the exercises were bound by many directives and restrictions which they were to take into account while planning large exercises. One should, however, understand that in the Polish General Staff in the sixties and the seventies such a working atmosphere was created that circumventing those directives and restrictions was not impossible.

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Review and approval of the plans for a front exercise of the Polish Armed Forces took place at three national levels, and finally at the level of the Warsaw Pact (CAF) CINC. At the lowest level, the plans were reviewed by the Chief of the Operational Training Department of the General Staff of the Polish Armed Forces, who made decisions on a frequent basis (at times, day-by-day). Such reviews had the character of working discussions. In cases involving less concrete (or less controversial) issues, there might be only short informational remarks by the chief author of the exercise, followed by concrete proposals, which the department chief took into consideration.

The second level of review was the Collegium of the Chief of the Polish General Staff. In principle, this organ considered the exercise plans twice:

- The first time, it reviewed the plans and provided comments on the "Leading Thought" of the exercise.
- The second time, it reviewed the plans after completion of all planning work.

During the review of the plans, the members of the Collegium noted their remarks and reservations (most frequently within the sphere of their own specialty). Thereafter, the Chief of the General Staff concurred with these plans (signing them as his "own"), sometimes recommending minor corrections.

The Minister of National Defense was the third and highest national review and approval level for exercise plans. Routinely, he considered these plans twice; initially one to two months before the date of the exercise, when the plans were supposed to be submitted for the approval of the CAF CINC in Moscow. He got a second look when he began his own preparations to direct the exercise.

In the first instance, the Polish Minister of National Defense approached the issue superficially, being in principle interested only in what extent the plans for the exercises corresponded with Soviet directives. If satisfied, he formally approved these plans. This entire process was rather a formality and took no longer than one or two hours. Just before the exercise, when the defense minister was preparing himself to manage the exercise, however, he approached the issue in quite a different fashion. The review of the plans at that point was very detailed, and could last from several hours to two days.

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The approval of the plans by the CAF CINC belonged to the so-called "delicate issues" (actually, argumentative issues) in which Soviet views differed considerably from the positions of certain national commands (chiefly the Romanians; partly the Poles).

The CAF CINC, representing the Soviet side, stipulated in his annual directives that the "Intention of Both Sides" be submitted for his approval for all exercises conducted under the "Plan of the Most Important Joint Enterprises of CAF." Some of the Warsaw Pact states conformed to this directive without any reservations. Romania ignored it completely. Certain other states, such as Poland and reportedly Hungary, conformed partially. The Polish tactic was to submit plans to the CAF CINC which were already approved by the Polish Minister of National Defense, hoping to accomplish two goals. The first goal was to demonstrate indirectly to the Soviets that, in the opinion of the Poles, the approval of exercises organized and conducted by national commands belonged in the purview of those commands, and not to the CAF CINC. The second goal was to deprive the Soviets of the option of demanding significant changes in plans prepared by the Polish General Staff and already approved by the Minister of Defense.

The Poles also tried to downplay the significance of the very act of approval of the exercise plans by the CAF CINC. Whenever possible, the Chief of the Polish General Staff personally handled this issue. In a few sentences, he informed the CAF CINC about the exercise problems and pushed forward the document for his signature. The CINC, however, never approved the document on the spot.

In the first instance, all documentation of the exercise was reviewed by the CAF Deputy Chief of Staff for Operations, along with the chiefs of nearly all organizational elements of the CAF staff. From the Polish side, explanations and answers to questions were usually provided by the chief author of the exercise.

After the completion of the review process in the CAF staff, the exercise plans moved to the General Staff of the Soviet Armed Forces. In certain isolated cases, representatives of the Polish side were invited to provide explanations to the USSR's General Staff on the spot. Only after explanations and resolutions of all issues at this level did the CAF CINC approve the exercise plans.

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F. WHAT RELATIONSHIP, IF ANY, WAS THERE BETWEEN PLANNING AND THE TRAINING CYCLE OF PARTICIPATING UNITS? HOW WERE PARTICIPATING UNITS SELECTED? DID THE CONSTRAINTS OF TIME, UNIT AVAILABILITY, FUNDS, OR FUEL AFFECT PLANNING FOR EXERCISES?

The exercise principles outlined earlier in this report regulated the frequency of exercises of specific elements of the armed forces, that is operational units (fronts and fleets), operational-tactical units (armies and corps), and tactical units (divisions, flotillas and brigades) of all the branches of the armed forces and the principal defense systems (i.e., national air defense) and support (rear or transport, etc.). These principles did not stipulate the composition of the exercising element and did not define specific units which should take part in the exercise. Further, they also did not specify such vital planning elements as length of the exercise, number of personnel, type and amount of equipment (i.e., tanks, aircraft, ships), as well as space dynamics. All of these elements were determined individually and separately for each exercise, with general guidance from CAF headquarters, and with details provided by the organizers of an exercise.

The generalities, i.e., the main participants of an exercise, etc. were defined rather routinely, depending on the character of the undertaking. The specifics, on the other hand, were determined on the basis of a detailed analysis of purpose and training needs, as well as in part by resource constraints and availability of training areas. Thus, the same exercising units were called for the two-year cycled skeletal (cadre) front exercises of the Polish Armed Forces. These were:

- On the Polish side, the commands and staffs of the Polish Front, three combined-arms armies and one air army.
- Command and staff of at least one corps of National Air Defense, as well as operational command and staff groups of the Polish Navy.
- On the Soviet side, usually an operational group of the command and staff element of one combined-arms or tank army.

The above composition of an exercising front was routinely designated by the CAF staff in the CAF "Plan of Joint Enterprises."

The General Staff of the Polish Armed Forces (as the organizer of an exercise) took into consideration the national

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characteristic of the Polish Front as well as the above-mentioned factors, and routinely included in the exercise composition:

- The Central Institutions of the Ministry of National Defense, which detached from their peacetime structure the command and staff of the Polish Front.
- Commands of military districts, which detached from their peacetime structure commands and staffs of combined-arms armies, as well as commands and staffs of the wartime military districts.
- The Air Force Command, which detached from its peacetime structure the command and staff of an air army and the wartime Air Force headquarters.

In order to ensure the functioning of all exercising commands and staffs under field conditions, the composition of those exercising routinely included all units earmarked for them in wartime (brigades and regiments) for communications, services, and support.

For the purposes of operational camouflage of a frontal exercise through the activation of fictional nets and directions of communications, nearly all communications units of the Polish National Territorial Defense (OTK) were routinely called up. These were units earmarked in wartime for the support of MND command posts and leadership posts of the Committee of National Defense (KOK).

The composition of the above-mentioned exercising units was supplemented with units of various types and designations, with the idea of adding some specific, "modern" training goals. For instance, to improve coordination through the exercising commands and staffs for executing the first nuclear mass attack, commands and staffs of all operational-tactical rocket brigades and the technical field rocket bases could be used in an exercise. In addition, a limited number of tactical rocket/missile divisions, rocket transport divisions, etc., might be included.

If, for organizational or budgetary reasons it was decided to include only some commands and staffs of operational-tactical rocket/missile brigades, then selection was based on rotational principles. A similar approach was taken in the cases of selection of other tactical units and elements of armed forces branches and types of services, with the thought of reaching some specific goals, such as upgrading, research or control.

The cycling (rotation) principles, although adhered to, never restricted the central echelon, which had a full freedom of

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choice and which was frequently guided by different considerations (e.g., relocation or the state of training of a given unit). Thus, for example, if for training purposes it was intended to use some kind of an operational-tactical rocket/missile brigade in the first mass nuclear attack after a redeployment of the line by 300-400 kilometers, then such a brigade was selected which made the implementation of this intention possible because of its peacetime location, rather than the brigade which was due to take part according to the principles of rotation. A similar approach was taken in situations in which demonstrations were planned, such as tanks crossing water obstacles. If such a show was to be conducted, then the division which was best prepared for this purpose was selected, rather than the one which was next in turn on the basis of rotation.

Time and units available for use had no great influence on the planning of exercises. Time was allotted as needed to reach training goals. The season of the year, however, was selected with great care, basically for two reasons:

- The desire to conduct exercises (especially those involving the participation of troops and heavy equipment), under the most difficult conditions, i.e., during a cold winter, or during the fall and spring thaws;
- The intention to avoid agricultural losses resulting from the activities of the armed forces outside designated training areas. In such cases, the season was selected which provided for the greatest activity of the armed forces in the agricultural areas before spring planting of the crops or after the fall harvest. For command and staff or skeletal exercises, the season of the year did not play a great role, since staff vehicles, communications and support equipment moved chiefly on the roads and deployed only in the forests.

In large skeletal exercises, attempts were made to schedule exercise activity so as not to conflict with the leave time of the control personnel. For this sole reason, as a rule no exercises were conducted during July and August.

Economic considerations were a rather large factor in the organization of training programs for the troops. Financial and technical material limitations (fuel, engine/hours, kilometers of resources use) were given priority at the lowest echelons (divisions, regiments, battalions). Higher echelons--the Ministry of National Defense, commands of military districts, and branches of the armed forces--reserved for themselves

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considerable funds, kilometer limits, etc., which more than covered the needs of exercises organized and conducted by them.

In the Polish Armed Forces prior to 1970, the costs of exercises were never computed. Such computations began in the 1970s, but only after the completion of exercises. Such a situation existed at least until the early 1980s. It is difficult, therefore, to speak of any restrictions on the available technical-materials or financial means. Certainly, there was a lot of talk about the need to economize, although never in any sense of restricting or reducing input, but rather in the context of the most effective exploitation of resources to achieve training goals.

G. WHAT KIND OF INTERACTION WITH THE SOVIET UNION EXISTED IN THE PLANNING OF JOINT EXERCISES?

In the mandatory system of directing the so-called "Common Defense" of the Warsaw Pact states, which ensures for the Soviet Union total control over the planning of any military activity, including the planning of exercises, it is difficult to talk about interaction. As mentioned earlier, the Soviet Union "coordinated" the planning of exercises unilaterally, beginning with the first initial phase (issuance of an annual CINC CAF Directive for CAF and the "Plan of Joint Enterprises of CAF"), to include the approval of plans for specific exercises prepared by national commands, and control of these exercises.

Theoretically, national NSWP commands had a right to accept only what conformed to the interests of their national security and what was feasible within their economic and technical-material limits. Long years of practice indicated, however, that the national commands (with the exception of Romania) identified their national security interests with those of the Soviet Union, and approved all Soviet initiatives without objection. The NSWP role in the planning of joint exercises was chiefly limited to the implementation of Soviet directives and plans in their own countries.

Certainly, in instances of detailed planning of a joint exercise recommended for conduct to a national command, the influence of that command on its planning could be quite significant. This was made easier by the fact that, at least until the end of 1981, the Combined Armed Forces of the Warsaw Pact did not have any joint, i.e., common, field manuals; each national army used its own field manuals. An equally favorable circumstance was the significant differentiation between the organizational structures of the separate armed forces of the Warsaw Pact states.

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In this respect, certain attempts at joint interaction were undertaken, chiefly via presentations by the allies of the Soviet Union of views other than Soviet. These took place during working meetings of planners of joint exercises and concerned various issues, beginning with the estimate of the military potential of NATO in Europe and its offensive capabilities, to include the role and the place of National Territorial Defense forces in the coalition defense system. Unfortunately, this was an echelon which did not have sufficient "piercing power," and consequently had no influence on the military solutions which were formulated during the conduct of the exercises. The higher national military commands, servile toward the USSR, avoided even the slightest conflicts, creating a work atmosphere which reflected a virtual race to incorporate the principles of Soviet strategy, operational art and tactics into the plans for exercises. These principles included the newest Soviet views and solutions taught at the Soviet military academies or propagated in Soviet periodicals.

H. DID THE EXERCISE AREAS REQUIRE PREPARATION?

In general, no. In this instance, lip service was paid to the principle that staffs and forces should exercise in conditions approximating wartime and depend chiefly on their own, or the cooperating national or allied, means and forces. This principle did not mean, however, that exercise areas were not prepared.

The greatest investment in resources and manpower was in the preparation of military firing ranges on the territory of the states in which episodes of exercises involving the actual use of forces and heavy equipment took place. Such preparations, however, were treated as lasting investments and were rather based on planning. At times, to satisfy specific needs for an exercise, certain existing installations or objects were expanded, improved, or even rebuilt.

Aside from the firing ranges, exercise training areas were not prepared, except in a very few exceptional cases. The exceptions were chiefly installations already planned for construction in the framework of the preparation of the territories of Warsaw Pact states as part of the Theater of Military Operations. In this respect, in the exercise preparation phases, and subsequently within the exercises themselves, the following preparations took place: construction of vehicle and rail access roads and alternate bridge and ferry crossings, preparations of sections of rivers for military crossings, preparation of isolated shoreline or beaches for loading of heavy military equipment, construction of cable communications lines, construction of permanent, alternate or

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simulated National Air Defense missile launching sites, shelters, and earth-filled field aircraft emplacements, camouflaged installations, etc.

At times, tactical elements (often on their own initiative), conducted engineering preparations of alert and alternate mobilization areas, as well as anti-aircraft ditches, or even light field shelters. Such activity was welcomed, providing that such work took place away from actual wartime alert or alternate mobilization areas--areas in which such activities were not allowed in peacetime.

1. WHAT KIND OF MEASURES WERE UNDERTAKEN TO CAMOUFLAGE THE SIZE, AIMS AND PARTICIPANTS?

In the view of the military leadership of the Warsaw Pact, exercises with the participation of a significant number of commands, staffs, and troops belonged to the category of military activities which could not be concealed from foreign intelligence. These leaders were, however, convinced that with proper security it was possible to hide the type, size, purpose, the actual conduct, reworked contents, and applied solutions of the exercise. With this in mind, activities were implemented on three levels:

- Protection of the secrecy of the exercise.
- Conduct of operational camouflage activities.
- Counterintelligence support.

In protecting exercise secrecy, it was assumed that top secret data lost this degree of classification (ceased to be such) the moment it became available to a larger group of people. On this basis, the principle was introduced and adhered to that personnel involved in an exercise could know only whatever was necessary to fulfill their duties and tasks (need-to-know principle). Special security encompassed various documents and data of even the smallest segments of war operations plans. Such war planning information was never revealed to people who were not given access to operational planning and were not directly involved in such matters. Such information also was not reflected, not even to the slightest degree, in the official summaries of exercises or materials published about them.

In the case of more important exercises, an intensified effort to protect office secrecy would be in effect. Drafts, maps, and drafting papers had to be registered prior to their use, and entered into a special ledger. Access to working

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facilities where exercises were planned, or where activities connected with exercises took place (typing offices, printing shops, drafting offices, etc.), was restricted to people working there. After the completion of exercises all documentation, with the exception of materials designated for the archives, was destroyed by a special commission.

Various restrictions on the use of technical communications means, especially radio, were introduced during exercises. Transceivers were used only in exceptional circumstances, in instances defined by the plan. Open text transmission via uncoded technical means was not permitted in any instance. Special classified documents related to command, such as code tables, voice cipher tables, radio call sign tables, as well as addresses of functional personnel, map codes, etc., were prepared and used for managing and commanding exercising units. In order to assure discipline among exercise participants in the use of technical means of communications, the Military Internal Service monitored telephone and radio conversations and controlled radio traffic.

Operational camouflage was based on the principle that an "information vacuum" about an exercise could not be permitted, since it would lead to intensified efforts by foreign intelligence to decode it. Properly thought-out, well-planned and astutely transmitted data to foreign intelligence could well lull the foreign collectors to sleep and mislead them about the purpose, content, etc., of the exercise.

Operational camouflage of an exercise was an integral part of a long-term, broader, more complex effort to camouflage the operational military potential of the Warsaw Pact. This effort was conducted by centralized means, following a standardized and central five-year plan. The planning of operational camouflage was coordinated by the General Staff of the Soviet Armed Forces, bypassing the Staff of the Combined Armed Forces. This planning was implemented by the national commands of the Warsaw Pact states, who based it on their own five-year plans. Exercises organized and conducted by the CAF were, at the request of this command, camouflaged by the Soviet side, in accordance with the plan of the General Staff of the Soviet Armed Forces, with a proviso that a part of this effort was usually entrusted to national commands.

The extent and scope of camouflage undertakings depended on the type of exercise. In instances of exercises and training of the Unified Air Defense System of the Warsaw Pact states, the bulk of the effort was placed on the camouflage of the functioning command system and the active radar field, as well as the primary and alternate air defense missile sites. With the

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goal of misleading the reconnaissance and intelligence means of NATO, simulated networks and command directions were activated, along with a system of simulated elements of radio-technical troops and missile sites. Simultaneously, a tight restriction on radio-electronic activities was put into effect, in order not to compromise frequencies reserved for wartime.

In other situations--for instance, in fleet exercises with the goal of upgrading the cooperation of naval and ground forces in landing troops on the Danish Islands--camouflage was worked out in such a manner that foreign intelligence could conclude that these exercises were devoted to the defense of the maritime shores. Means and methods employed in this instance could be of various types, beginning with deception conducted by means of controlled leakage of data via easy-to-read radio traffic and disinformation through human agents.

The greatest efforts of the General Staffs of the Warsaw Pact armed forces were concentrated on the camouflage of large exercises of the combined branches of armed forces, conducted on the front and Theater of Military Operations levels. In such instances, in the Polish Armed Forces, special Polish radio-electronic camouflage measures were put into effect during "LATO"-type front exercises. As of the beginning of the seventies, a special electronic camouflage operation ("ELEKTRON") was put into effect in conjunction with such exercises. In the framework of "ELEKTRON," detached communications troops of the National Territorial Defense were used to simulate the command organs introduced for the "LATO" exercise. These forces were deployed in totally different regions than the exercising staffs, and were moved in directions designed to mislead NATO intelligence. Further, their communications traffic was programmed in a manner which was intended to deceive foreign intelligence as to the type of the exercise, its aims, conduct, etc. In order to provide credibility to data broadcast over the airwaves, the military organs of operational camouflage, (in the Polish Armed Forces, Department IV of the Operational Directorate I of the General Staff) provided specialized elements of the Military Internal Service and the Ministry of Internal Affairs with additional false data for "sale" via double agents. The above data were mixed with some real information about the military potential and activity of the Warsaw Pact which was known to be already in the hands of foreign intelligence.

In order to isolate foreign diplomatic personnel from the actual regions in which exercises took place, disinformation was frequently employed, along with the usual restrictions. This disinformation helped direct the attention of foreign intelligence toward the simulated exercise regions.

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The methods of counterintelligence exercise support are not sufficiently known to the author of this study. From limited observation, it seems that such support began in the early planning phase of an exercise, and ended only with the securing of all exercise documentation after its completion.

During the exercise planning phase, counterintelligence officers were in constant contact with the exercise planners. They inspected the facilities in which the planning took place, and where technical work was done (drafting, typing pools, printing shops and computer facilities). For the period in which exercises were conducted, larger forces and counterintelligence means were brought in, using for this purpose the Military Internal Service and other elements of the Ministry of Internal Affairs. The management of the exercise was kept informed about movements of diplomatic personnel and about other security measures being taken. After the completion of exercises, the counterintelligence organs discreetly supervised the destruction of exercise materials and ensured the security of documentation designated for the archives.

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IV. UNDERSTANDING EXERCISE SCENARIOS

A. TO WHAT EXTENT DID THE SCENARIOS OF JOINT EXERCISES REFLECT ESTABLISHED DOCTRINE AND TO WHAT EXTENT EXPERIMENTS OF NEW CONCEPTS?

The Warsaw Pact does not have such a distinction in practice (i.e., a division into the established doctrine and stricto sensu experiments of new solutions). The Warsaw Pact states are guided by the so-called "coalition-doctrine, based on the Soviet potential and experiences"¹⁴ which, when translated into practical language, means not just the following of any specific doctrine shaped by a coalition (such simply does not exist), but rather an a priori recognition of the Soviet War Doctrine. This doctrine arises, develops and is subject to experimentation mainly in the environment of Soviet theoreticians and military practitioners, actually outside the realm of the CAF of the Warsaw Pact.

The experiences of the entire history of the Warsaw Pact indicate that this Soviet doctrine never reached the Pact allies in the form of an idea, concept or experimental solutions, but rather in the form of revealed truths which were not subject to discussion. Pact joint exercises themselves constituted one of the most important forums for the revelation of what in Soviet doctrine was not only mandatory but also most modern. Scenarios of joint exercises, especially the exercise critiques, carried the force of the most modern, official explanation of Soviet doctrine. One could cite such explanations as one would any manuals. Could one, in connection with this, state that new concepts and solutions were included in the scenarios of the joint Warsaw Pact exercises only after being fully tested in the Soviet armed forces and obtaining the final approval of its management? In general, such was the tendency; however, in

¹⁴ In the military terminology of the Warsaw Pact, the concept of a doctrine is not associated exclusively with a system of mandatory regulations and manuals for military activities. This term, and more exactly "the war doctrine" signifies rather a set of views regarding key problems concerning the conduct of future wars, recognized officially by a given state or a group of states and focusing on such views as:

- the character and ways of conducting foreseen war activities;
- the main premises which stem from the character of foreseen war activities, as well as strategic, operational and tactical premises regarding all branches of armed forces and services contained in regulations, instructions and any other official manuals and publications;
- the organization of the armed forces and their preparation for war tasks.

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practice there were many examples in which the Soviet side presented solutions which were not yet mature, and were far removed from their ultimate shape.

It happened that way, for instance, with the concept of the conduct of air and anti-air operations in the Theater of Military Operations, the concept of combatting cruise missiles, and even in the concept of offensive operations in the Theater of Military Operations involving the use of operational maneuver groups. In all these instances, the Soviets modified these concepts repeatedly, improving and changing their very premises. However, they never presented a clear issue to their allies, and never implied that concepts or solutions presented during joint exercises had a research or experimental character. On the contrary, they did everything possible to ensure that the concepts presented in the scenarios were immediately accepted and implemented in all NSWP armed forces, in every phase of the development of these concepts.

B. HOW MANY DETAILS WERE NORMALLY INCLUDED IN THE SCENARIOS? WERE RESULTS FORESEEN IN PLANNING? WERE OUTCOMES PROGRAMMED?

The extent of detail in exercise scenarios varied widely and depended on many factors, such as the type of exercise (command and staff on maps or in the field with troops, one- or two-sided, etc.), its purpose, scale and organization and methods of conduct. Normally, the time needed for preparation and the individual traits of character of the organizers also were factors which had to be considered. The most important, decisive factor, however, was the Soviet's structured approach. The Soviets not only did not allow any new elements and improvisations (a position which could be understood), but also excluded the possibility of multi-variant solutions, and in consequence, drove the results of an exercise. The entire conduct of an exercise, including its result, had to be basically foreseen in advance in planning which determined the character and the number of details normally included in the scenarios.

In conformance with Soviet demands, the key aspects of the scenario were formulated in the "Intentions of Both Sides." The scenario's full development, however, was worked out in detailed preparation of the "Plans of the Conduct of an Exercise."

1. "Intentions of Both Sides." In concept, this document depicted the potential of forces and means, strategy and doctrine, as well as plans and the consequences of enemy action on the one side. On the other side, friendly forces, plans and consequences of action, based on the mandatory doctrine, were also presented in a conceptual context.

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Among the mandatory details which had to be included in the "Intentions of Both Sides" were, inter alia:

a. The groupings of enemy and friendly forces with the elements of higher echelon, neighbors, and the system of territorial defense of the country before the onset of action.

b. The most important elements of operational (action) plans of enemy and friendly forces (sectors of action, main directions of strikes, near-time and subsequent tasks, concepts of use of mass-destruction weapons, command concepts, etc.).

c. An outline of the operational development (results of action).

d. Numerical information which characterized the most important parameters of the dynamics of the operation (the width of the sectors of action, depth of tasks, the tempo of offensive operations with and without the use of mass-destruction weapons, the duration of operations, etc.)

e. Quantitative and qualitative juxtaposition of friendly enemy forces in various directions of action and in various stages of the operation.

2. "Plans of the Conduct of the Exercise." These plans had the character of detailed scenarios worked out in advance, including all of the phases of development and the courses of actions, including "sample" decisions of exercising commanders which they should have undertaken in specific stages, days, or episodes of operations. Plans of this type normally were prepared for each day of an exercise. Among the mandatory details to be included were, inter alia:

a. Information about the enemy, at the beginning and end of each day of the operation (combat):

(1) Enemy order of battle and deployment in the sectors of action of the exercising elements, in the sectors of neighbor's activities, as well as in the depth of the theater (if they influenced directly or indirectly the course of the operation).

In practice the information about the enemy was often expanded even further. For example, for the front exercising in the central strategic direction of the Western Theater of Military Operations, nearly all forces of NATO's Northern and Central Army Groups were depicted, as well as NATO's Second

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and Fourth Tactical Air Forces, Joint Forces of Danish Straits and the Western Baltic, US and British air forces based in Great Britain, NATO naval forces operating in the North Sea, the basic elements of the French Armed Forces, as well as forces of border police and of the territorial (regional) defense of the FRG.

The deployment of the enemy was shown at two levels below the exercising elements. For instance, for a two-level exercise (front and Army), the deployment of NATO ground forces down to battalion level was shown. NATO missile forces (surface-to-surface; surface-to-air) were shown down to battery level.

- (2) The most important elements of the logistical support and infrastructure of the TMO.
- (3) The general intentions of the enemy, the most important elements of the enemy plan of action and the manner of execution of this plan.

b. Information about friendly forces, also at the beginning and end of each day:

- (1) Strength levels and deployment of all elements of the operational combat grouping (down to two levels below the exercising elements).
- (2) Selected elements of higher level forces and the intent of their action.
- (3) General deployment of neighboring units, their tasks and intent of action.
- (4) Elements of territorial defense of the country and the infrastructure of the TMO.
- (5) An outline of "sample" decisions for those exercising, including:
 - Definition of a decision regarding the type of action (for instance, move to offensive operations with the whole strength of forces, pursue, or defend with a part of the forces).
 - The main direction of thrust (the main effort).
 - Concept for the use of conventional and mass-destruction weapons.

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- Deployment of forces and their tasks.
- Means of joint operations.
- Command and control concepts.
- Information justifying the decisions.
(calculations concerning qualitative-quantitative correlation of forces, conclusions from the field evaluation, calculations of time, meteorological conditions, etc.)

(6) An outline of ways to implement the decision.

C. TO WHAT EXTENT DID EXERCISES REFLECT OPERATIONAL PLANS?

Prior to late 1981, there was no known instance in which a front- or army-level exercise was conducted in accordance with actual operational (war) plans. This was rigorously prohibited and scrupulously observed; violating this taboo was considered treason. On the other hand, there was no known instance of an exercise (with the exception of special exercises for operational camouflage) whose premises would depart from the real premises of operational plans. Had such attempts taken place, the proposed exercise scenario would have failed to obtain approval early in the planning process.

What then was routinely changed to distort the picture of real operational plans? In the first place, as a principle, the following elements were distorted: combat composition, numerical designators of units and the timing of their combat and mobilization readiness. There were, however, no rules governing whether the distortions were to be toward an increase or decrease in the number of forces. In exercises organized by the Soviets, one could note certain tendencies to distort on the side of inflation, i.e. somewhat greater numbers of Soviet forces were shown, and these were shown in a higher state of readiness than in reality. In exercises organized by the Polish side, distortions of the Polish forces were relatively minor. The composition of a Polish front and army was generally accepted as it was foreseen by the operational plans. Only the numerical designations of units were changed, through the use of a simple key involving addition or subtraction of a number (for instance, 10). Times needed for mobilization of specific units and their attainment of combat readiness were either shortened or lengthened. Care was taken, however, to make sure that the general balance of resources and forces of an army and a front reflected near-reality. Normally, differences were plus-minus 5-7 percent.

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The Soviets were also very sensitive about revealing the actual peacetime locations of units and their alert and mobilization areas. In connection with this, their distortions sometimes went so far that any attempt at reconstruction of reality from the materials of an exercise did not seem possible.

The Poles preferred not to resort to fiction. They based their premises on the fact that hiding of the peacetime location of units--starting at the level of a mechanized regiment, tank regiment, artillery brigade or an air regiment--in contemporary times was not possible. They thus used actual data, including the territorial boundaries of their peacetime and wartime military districts, as well as the areas of responsibility of the national air defense forces and the navy. Only fictional mobilization areas and areas of the formation of new military units (for instance, divisions and reserve regiments) were accepted. Even these distortions, however, were not very drastic. The Poles used the same criteria in selecting fictional areas as in selecting actual areas. For instance, if there was a requirement for an alternate alert area for a unit where troops were led from the barracks for replacements of forces and supplies to be located at a distance not further than an hour's march and close to roads for deployment in the operational direction, then the exercise area as a rule had to satisfy these criteria. Also, for example, if a military district was to form in wartime a reserve division in the region of Silesia, then the exercise areas would be different, but would be located in Silesia.

One of the key dilemmas of the organizers of exercises was the programming of exercise dynamics in such a way that they approximated to the maximum what was foreseen by the scenario planned with unusual details of the real future war, and yet would not reveal key elements, which included:

- Methods of wartime strategic deployment of armed forces in the Theater of Military Operations.
- Timing, boundaries, and direction of introduction into the battle of various fronts and armies.
- The main and auxiliary directions of strikes.
- Targets for strikes by conventional and nuclear weapons.
- Near-time and subsequent tasks for fronts and armies.
- Operational limits of nuclear and chemical weapons.
- Command, control and communications systems.

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- State of reserves of technical-material means and their dispersement.

Exercise methods of strategic deployment of the armed forces in the Theater of Military Operations reflected rather faithfully the premises of operational plans. In principle, the routine of conversion of forces from peacetime to wartime was never changed. Alert notification signals were sometimes altered for exercise purposes in increasing the level of combat readiness; however, these alert signals were transmitted via identical means to be used in the event of real emergency, and via typical communications channels.

The wartime systems of command for front and army were always deployed in their actual mode, and in the time frame foreseen by operational plans. The only distortion in these cases was the deployment of specific command posts in the exercising areas. Attempts were made, however, to deploy front and army CPs approximating the distances foreseen by the plans.

In all exercises, operations of deployment of front and army forces were rather faithfully reflected. Sectors for deployment of forces, routes for specific units, as well as departure areas for offensive operations were routinely changed. The scale of distortion in such cases varied, and depended on the general concept of an exercise. At one time, for instance, in exercise "ZAPAD-77," the changes were minimal (the Soviet Baltic, Belorussian and Ukrainian Fronts were redeployed on maps through the territory of Poland and Eastern Germany, through sectors which were nearly identical with actual operational plans). In another instance, however, during the training of General Staffs of the Warsaw Pact forces in 1979, the changes introduced seemed to result in an extreme distortion of reality.

In all instances of army and front deployments, however, the number of redeployment routes was identical with actual operational plans, and march-assembly order approximated reality. The wartime system of directing and controlling movements of forces was deployed and put into operation. Units were redeployed to locations and with the timing approximating that foreseen in operational plans. The same criteria were used in the selection of areas for daily rest, and for regeneration of readiness. Organization and methods of air cover for redeploying forces, as well as engineering, communications, technical-material and medical support, followed actual plans.

Timing, boundaries, and directions of introducing fronts and armies into combat belonged to the most protected elements of the plan, and these real data were never used in exercise scenarios. The simplest and most frequently used distortion measure was a change of the direction of action. In principle, all fronts and

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armies situated in the depth of the Theater of Military Operations exercised as a rule in several strategic (operational) directions of the theater, and only one of these directions approximated a reflection of operational plans. For instance, Polish Front forces exercised, in principle, in three strategic directions of the Western Theater of Military Operations, while only one (Northern-Maritime) was nearly identical with the operational plans. If the Polish Front exercised in the operational direction foreseen for it, then distortion possibilities were not too great. In such an instance, the timing of its introduction into combat could differ from actual plans by up to 24 hours, either earlier or later. The sector of introduction of the Polish Front into combat and its offensive operation in such a case also differed, but insignificantly. The lines of demarcation between fronts were considered very sensitive, since they revealed the flanks and gaps. In exercises, the boundary lines were never the same, although their shifts (to the left or right) were no greater than 30-50 kilometers. The shifts of demarcation lines between armies were even smaller, and sometimes--as for instance with a Polish army in action in the operational direction of JUTLAND--the demarcation lines were identical with those shown in actual plans.

Boundaries of introduction of forces into combat differed, however, significantly. This stemmed in part from the exercise premise (always the same) that the conflict was initiated by NATO, exploiting the element of surprise, whose forces achieved some success in the first border skirmishes. The forces of the Warsaw Pact then always began offensive operations from unfavorable positions in Pact territory.

As a result, the exercise boundaries of entry of fronts into combat were usually pulled back from the FRG-GDR border from those which were planned:

- In exercises organized by the Soviet side, by 30-40 kilometers.
- In exercises organized by the Polish side, up to 100-120 kilometers. (Source Comment: The Soviets were always reluctant to approve these deep NATO penetrations.)

All of the above information relates to a Polish Front exercising along the direction of action foreseen by the operational plans and without the introduction of agreed (stipulated) state borders between NATO and Warsaw Pact countries. In instances in which such borders were defined (for instance during the training of the general staffs of allied forces in 1979, and during exercise "ZAPAD" in 1981), such comparisons cannot be applied.

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In exercises organized in the directions of action foreseen by the operational plans, the main and auxiliary directions of strikes, as well as the near-time and subsequent tasks of fronts and armies reflected the real wartime premises to a large extent, in respect to the space, and in respect to the forces of NATO. Thus, for instance, the Polish Front moved to offensive operations in close conformity with the operational plan (as with nearly all exercise scenarios organized in the Northern-Maritime operational direction), in two divergent directions:

- Ludwigslust, Verden, Brussels.
- Gustrow, Rendsburg, Skagen.

The main Polish strikes took place in the Ludwigslust-Brussels direction, in conjunction with the Soviet front formed from the Group of Soviet Forces in Germany and in cooperation with the Combined Baltic Fleet. In the near-time task, the Polish Front attacked forces of the First FRG Army Corps, the First Dutch Army Corps, and the German-Danish JUTLAND Army Corps, taking control of the northwestern territory of the FRG (somewhere up to the river EMS) and the southern part of the JUTLAND Peninsula, including the border areas of Denmark. In its subsequent task, the Polish Front destroyed a part of the reserves of the Northern Army Group as well as the Joint Northern Forces of the Danish Straits, and of the Western Baltic, taking control of the territory of the Netherlands, Belgium and Denmark. For the purpose of seizing SJAELLAND (ZEELAND) Island, a sea-air landing in the strength of three Polish divisions (6th Airborne Division, 7th Sea Landing Division and 15th Mechanized Division) was organized. In the exercises, this landing took place on the third or fourth day of war (in the framework of the near-time tasks). The actual operational plans, however, envisioned this operation for the sixth to eighth day of war (i.e., in the framework of subsequent tasks).

Within such tasks, all of the Polish combined-arms armies (1, 2 and 4) as well as the Third Air Army exercised their actual operational plans. The Second Army deployed from the basis of the Silesian Military District and operated in the first echelon of the Front on the main direction of the thrust. In the initial operation, operating with a Soviet tank army of the Central Front, it attacked the forces of the 1st Dutch Army Corps and elements of the 1st FRG Army Corps, also gaining control of the WESER River sites in the area south of VERDEN. In the subsequent task, operating with the same Soviet tank army and the 4th Polish Army deployed from the Warsaw Military District, the Second Army attacked the reserves of the Northern Army Group and took control of EMS river sites. In a subsequent operation, it deployed in an operation toward the borders of France aimed at the control of Brussels.

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The 1st Polish Army (from the Pomeranian Military District) moved to offensive operations in the direction of JUTLAND. Operating with the Combined Baltic Fleet, it attacked, in the near term, the forces of the JUTLAND Army Corps and took control of the KIEL CANAL. In the subsequent task, it attacked the reserves of the joint Danish and Western Baltic forces, also taking control of the border regions of Denmark up to the limits of FREDERICJA AND ESRJERG. In a subsequent operation, it attacked the remaining regular territorial and regional Danish forces, taking control of JUTLAND and the remaining island-part of Denmark, with the exception of BORNHOLM ISLAND, against which a Soviet paradrop was planned.

The 4th Polish Army, from the Warsaw Military District, always operated as the second echelon of the Polish Front. It entered the battle on the sixth to eighth day of war, from behind the right flank of the 2nd Polish Army, and initiated an offensive operation in the direction of BREMEN-AMSTERDAM.

In exercises organized on unplanned directions, the scenarios could reflect merely general premisses (concepts), or parameters of actual planned operations. This related in particular to the extent of the width of sectors of the front and armies. These scenarios often reflected good data on the strength of enemy forces, the type of offensive planned, the planned attack tempo, the density of tanks, artillery, and other equipment planned for the breakthrough segments, and along the main and auxiliary directions of operations, etc.

The quantitative-qualitative limits on nuclear and chemical weapons, accepted in all known exercises for front and army operations, and the targets for strikes with these weapons, as well as conventional means reflected not so much the concrete premisses of operational plans, but rather general concepts.

From the examples of the exercises of the Polish Armed Forces, it appears that the exercise limits of the weapons of mass destruction for front operations were 30-35 percent higher than those foreseen by operational plans. Since nuclear planning was the exclusive province of the Soviet General Staff, there was no way to ascertain to what extent the numbers of weapons and yields accepted in the exercises for the nuclear strikes on the part of the Front corresponded to the real plans.

Exercise strikes with nuclear weapons did not always correspond to reality; however, the nature of the targets was, in principle, always identical. The Front and armies executed nuclear strikes chiefly against nuclear-capable targets and enemy forces located within the sectors of their operational activity, starting at battalion level and upward. Stationary targets, however, (e.g., nuclear and chemical weapons storage sites,

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hardened command posts and communications centers, airfields, ports, etc.) were targeted by Soviet strategic forces.

Pact exercise scenarios varied regarding the timing of nuclear use, with nuclear initiation usually linked to the progress of the Warsaw Pact offensive. Prior to circa 1977, Pact exercise scenarios reflected NATO using nuclear weapons first and the Pact responding with a "full, mass strike" using strategic, operational and tactical systems. (Comment: The author could recall no instance of limited or gradual nuclear use by Pact forces.)

After circa 1977, Pact scenarios generally depicted a near-simultaneous NATO-Pact nuclear exchange, with the Pact detecting NATO preparations for nuclear use and launching its own mass strike.

The level of the technical-material reserves and their disposition (how much of what and at which level) largely reflected real data, although as a rule this level was intentionally lowered somewhat. Levels higher than actual ones, however, were never accepted.

D. HOW WERE NEW IDEAS INTRODUCED FOR TESTING DURING EXERCISES? WHO COULD DEMAND SUCH TESTS?

As mentioned earlier, new concepts and solutions of a doctrinal nature arose and were tested in the environment of Soviet theoretical and military practitioners. Ideas which originated in the NSWP countries, on the other hand, pertained primarily to new technical-construction solutions and their application in the weapons systems of the Pact. Examples of such ideas were the Polish system of air defense command automation (CYBER-DUNAJEC), which increased the technical-combat capabilities of the Soviet system (VOZDUKH 1P), or the Czech 152-mm self-propelled artillery piece (DANA), which competed with its Soviet counterpart. In such instances, the Ministry of National Defense of the interested country used the joint exercises to demonstrate the system's technical combat merits, in the framework of the routine attempts of introduction of proposed equipment into the armament system of the Warsaw Pact.

Such demonstrations were, however, not connected with any formal research and evaluation of the armament samples or military equipment introduced during the exercises. Official research and evaluation actually were conducted exclusively in specialized scientific-research and construction-development institutes of the Soviet Union and other Warsaw Pact countries involved in purchases.

Other ideas were of much lesser import, and concerned mainly minor improvements on alert and mobilization systems, the tactics

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of forces on the field of battle, organization, and methods of technical-material support, training of troops, etc. Such ideas were often introduced at the meetings of the military collegial organs of the Warsaw Pact, and were demonstrated by their authors in the framework of an exchange of experiences at the joint exercises. There were, however, no known cases of any NSWP country introducing an idea and demanding its evaluation.

E. WHAT WERE THE TYPES AND THE SOURCES OF DATA USED TO SIMULATE THE NATO SIDE?

The same standard types of sources and data about the potential and means of NATO which were used in other activities were used in the preparation of exercises and in operational planning. In this regard, with the exception of certain restricted data (sensitive because of source or value of data for war aims), there were no deceptive/false data or estimates used. In all instances, without regard to whether it was training, exercises, planning of the development of armed forces or operational planning, the forces and capabilities of NATO had to be presented as faithfully as they actually were at any given moment, or as they could possibly be in the future, in the given timing of the planning horizon.

Each national armed force of the Warsaw Pact used its own data about the enemy. This information was issued by their own Intelligence Directorates of the General Staffs. Data about the potential of forces and equipment of foreign armed forces (especially NATO) were agreed-upon and standardized, in the framework of allied coordination, with the Main Intelligence Directorate of the Soviet General Staff (GRU), which coordinated the military intelligence and information activities of all Warsaw Pact states.

In the Polish People's Republic, the standard types and sources of threat data (intelligence publications) were:

1. "Informator About the Armed Forces of Capitalist Countries." This SECRET publication, of about 200-250 pages, updated and issued annually, was designed for the chiefs of the Central Institutions of the Ministry of National Defense, commanders of armed forces branches, military districts, and chiefs of arms of troops and services.

"Informator" contained data concerning the defense potential of NATO as a whole, its individual members, and the most important European capitalist states, including the neutral ones (e.g., Austria, Sweden and Switzerland). Permanent chapters contained general data concerning the structure of NATO, its strategy and doctrine, combat readiness and mobilization systems, organizational structure of units and detailed data regarding the

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composition of ground, air, and naval forces in Europe, the United States, and Canada (numerical designators, order of battle, bases, etc.). Attached to the "Informator" were graphic tables reflecting manpower potential and data concerning the most important weapons systems (aircraft, surface-to-surface and surface-to-air missiles, tanks, etc.), as well as an order of battle map depicting NATO units and the most important NATO defense infrastructure in Europe.

2. "Vademecum¹⁵ About the Armed Forces of Capitalist States." This SECRET publication of about 250-300 pages, updated every several years, was designed for a wide circle of recipients down to and including regimental level (or independent battalion). It contained detailed data concerning organizational structures of the armed forces of capitalist countries, their armaments and equipment, operational tactics, etc.

3. Various classified (SECRET or CONFIDENTIAL) monographic studies devoted to a single specific theme of foreign armed forces (e.g., air defense, logistics, mobilization, etc.) There were many of these studies on a wide variety of subjects.

4. The Reconnaissance Communique, a SECRET, bi-weekly publication, was designed primarily for the upper-level management of the Central Institutions of the Ministry of National Defense, commanders of armed forces and military districts, and chiefs of arms of troops and services. These communiqes contained data about the activities of NATO armed forces during the preceding two-week period, as well as information on all new improvements throughout NATO in the fields of military armament and equipment. They also contained data about personnel changes in command and key positions, plus biographical sketches of foreign forces commanders (division-level and above).

5. SECRET "Information" pieces about more important NATO exercises were published successively during the conduct of these exercises, with complete analysis and evaluation of the exercise published a week or two after exercise completion.

6. A daily "Operational Report," classified SECRET, also was published. This report was designed to inform the leadership of the Ministry of Defense about the most important undertakings implemented by the armed forces of NATO, including data about their combat readiness and results of their inspections on the regional and global scales.

¹⁵ Translator's note: "Vademecum" is a word of Latin origin meaning an item or a handbook which professionals carry with them for consultation.

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Since all of the source materials about NATO reflected peacetime data, so-called "Identifiers of Enemy Units" were also prepared for exercise purposes (for controllers and players). These publications presented a given wartime state of NATO armed forces (prepared by the authors of an exercise), and their composition and numerical system of units. Determination of such a wartime state of NATO's armed forces resulted usually in many discussions and controversies between command/operations personnel and the specialists of military intelligence. Commanders and officers of operational elements (the actual authors of exercises), who were obliged to base the content of an exercise on the premise that war is a result of aggressiveness against Warsaw Pact states, tended toward an artificial "buildup" of wartime structure of NATO's armed forces--a "buildup" which was not reflected in realistic plans. Intelligence officers, however, having at their disposal supposedly credible data concerning limited reinforcement capabilities of NATO forces in a short period of time, were decidedly against such inflation of the NATO threat.

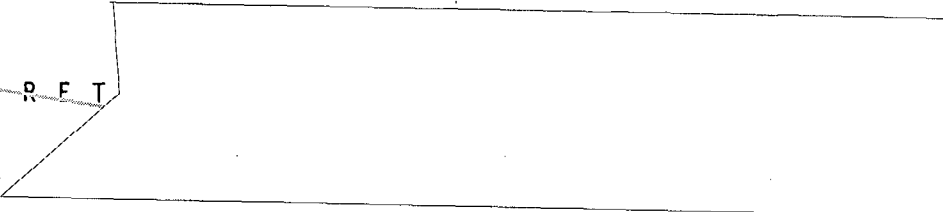
In exercises organized by the Poles, a compromise was usually worked out. It was based on the premise that, regarding the general data of the Intelligence Directorate concerning NATO plans--for increase of forces during crisis and wartime, it was considered that NATO was able to implement these plans partly in secret and partly under the cover of exercises, in a considerable shorter period of time. NATO was never, however, credited with greater forces than those indicated by actual intelligence data.

In exercises organized by the Soviet side, the authors of exercises did not pay much attention to the views of intelligence, especially regarding the issue of the military potential of the FRG. It was not extraordinary to consider that Bundeswehr forces could be doubled in the first days of war and reach a manpower level of one million troops.

Simulating NATO activities depended on the type of exercise and methods of its conduct. Two-sided exercises, in which one side acted in the role of NATO forces, were rare occurrences. If such an exercise was conducted, then it was most often at tactical level (battalion, regiment, or division), or involved only a two-sided war game on maps. In multinational two-sided exercises, because of political and propaganda reasons, units of one national army could not play the role of NATO forces against another Warsaw Pact army.

In one-sided exercises with troops, simulation of NATO forces was done by specially designated elements acting in accordance with NATO organizational lines and tactics, armed forces, aircraft, ships, etc. As in multinational two-sided exercises, it was inadmissible to have units of one national army

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act as pretenders against another national army. The only exception involved exercises of air defense of the Warsaw Pact. In such exercises, aircraft of one national armed force were routinely used to simulate NATO aircraft operating against Pact forces.

In large command and staff and skeletal exercises, exercising commands and staffs were informed about NATO activities by:

- Written directives, orders, maps, and premises.
- The umpires.
- Role-playing groups playing the role of reconnaissance organs of the exercising level and combat units in direct combat contact with the enemy.

The time, content, and means of transmittal of information were usually established in advance, in the "Plan of Conduct of the Exercise" and the "Plan of Dissemination of Information."

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V. ORGANIZATION AND METHODS OF DIRECTING LARGE EXERCISES

A. WERE ANY OTHER PEOPLE RESPONSIBLE FOR THE IMPLEMENTATION OF PLANS AND FOR ORGANIZING EXERCISES AFTER THE EXERCISE SCENARIO HAD BEEN WRITTEN?

The preparation of an exercise's plans and its all-encompassing organization were the responsibility of the team of authors. Implementation of the plans, however, was the sole responsibility of the management of the exercise, formed separately for each exercise. The structure of the management for a front exercise of the "LATO type" (staff, umpire team, and the exercise's role playing group) is outlined below:

1. Contact Management of the Exercise consisted of:
 - The Exercise Manager (usually the Minister of National Defense).
 - The Chief of Staff of the Exercise Management (routinely the Chief of the Polish General Staff).
 - Deputies of the Exercise Manager for National Affairs (other than the Polish Armed Forces), which participated in the exercise. On the Soviet side, the deputy manager of the exercise was usually the actual Deputy of the Chief of Staff for Operational Matters for the military district involved, or the chief of Northern Group of Soviet Forces (depending on where the exercising staffs and troops came from). In the event of participation by other national armies (for instance, the East Germans or Czechs), the Vice-Ministers of Defense were usually appointed as the deputy managers of the exercise.
 - The Deputy Exercise Manager for National Territorial Defense and Civil Defense (routinely the Chief Inspector of the Territorial Defense/Vice-Minister of National Defense).
 - The Deputy Exercise Manager for Political Matters (usually the Chief of the Main Political Directorate of PAF/Vice-Minister of National Defense).
 - The Deputy Exercise Manager for Rear Quartermaster Matters (the Chief Quartermaster of PAF/Vice-Minister of National Defense).

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- The Deputy Exercise Manager for Technical Rear Matters (routinely the Chief Technical Inspector of PAF/Vice-Minister of National Defense).
- Assistant to the Exercise Manager for Personnel Matters (normally the Chief of Personnel of the Ministry of National Defense).
- Assistant to the Exercise Manager for Counter-Intelligence Support (Chief of the Military Internal Service).
- The Manager of the Exercise Critique Group (most frequently the First Deputy of the Chief of the Polish General Staff).

As a general rule, the Polish compact management team of an exercise did not become involved in the direct management of the conduct of the exercise, but limited its activities exclusively to either individual or group observation of the exercise's conduct, listening to the reports of these exercising and considering and approving key decisions concerning current issues during the exercise, which were prepared each day by the staff of the management. Despite this, the most important decisions concerning the conduct of exercise operations were in principle the exclusive authority of the exercise manager. These could be undertaken in his name only by the chief of staff of the exercise management team. Other members of the compact management team observed episodes of the exercise assigned to them by the exercise manager and reported their comments to him.

2. Exercise Management Staff

The chief task of the exercise management staff was the implementation of the prepared exercise plans. These plans were corrected and brought up-to-date on a daily basis.

The exercise management staff was headed by the Chief of Staff of the management staff. Usually, he had four deputies:

- For operational matters (normally the Deputy of the Chief of the Polish General Staff for Operational Matters).
- For mobilization matters (the Deputy Chief of the Polish General Staff for Organizational-Mobilization Matters).
- For automated command matters.
- For communications.

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The Exercise Management Staff had a flexible organizational structure which had a tendency to continually increase the number of elements functioning within, as well as involve greater and greater number of officers.

The heart of the staff and its most important component part was the operational group, at times identified as the center of exercise management. It consisted of 50-60 officers who previously had taken part in the preparation of the exercise. The group's main task was the management of the current conduct of the exercise. Within the framework of this task, the operational group, often acting in the role of a higher command (i.e., CAF CINC in the Theater of Military Operations and the Polish Ministry of National Defense), transmitted directives, instructions and orders, as well as command codes established for the period of the exercise. The group also monitored and evaluated the conduct of their implementation and, depending on the activities of those exercising, programmed the conduct of the exercise for 24-hour periods. Parallel to this, the operational group also managed the activities of the umpire team, role-playing group, simulation, control, and support groups, etc.

Within the operational group functioned an operational team which consisted of six to nine officers selected from among the compact authors' team of the exercise. This team coordinated the execution of all of the above-mentioned tasks assigned to the operational group. Within the specific branches of the armed forces, arms and services, and the rear, there were technical teams of:

- National Air Defense forces (three to four officers).
- Air Forces (two to three officers).
- Navy (two to three officers).
- Electronic Warfare (two to three officers).
- Rocket and Artillery troops (two to three officers).
- Antiaircraft Defense troops (two to three officers).
- Engineering Troops (two to three officers).
- Chemical Troops (two to three officers).
- Signal Troops (two to three officers).
- Quartermaster Rear (seven to ten officers).

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-- Technical Rear (five to seven officers).

In addition, the operational group included an "Operational Duty Service," composed of three to four officers. This element was directly involved with accepting reports from exercise participants and transmitting to them various directives, orders, instructions, etc.

In addition to the operational group, the staff also had:

- An Organizational Group of about 20-30 officers from the Operational Training Department and the grouping of the Ministry of National Defense security and support units. The group was responsible for housing, messing, security, and transport for the exercise management team.
- An Active Communications Group of about seven to ten officers from the headquarters of the Signal Troops. This group was engaged in the deployed communications systems for the management of exercise players and role-playing groups.
- An Informatics Support Group of three to four officers from Directorate XIV of the Polish General Staff. This element was responsible for computer support for the management of the exercise.
- A Combat Readiness and Command Combat Group. The core of this group usually consisted of officers from Directorate I of the Polish General Staff, with the composition of the group depending on the number of units designated for the control and its limits. The main task of the group was the control of the development of the wartime command system for the exercising forces.
- A Mobilization Readiness Control Group of about 20 to 30 officers from Directorate X of the Polish General Staff. This group was responsible for control of mobilization development of the exercising commands and staffs, as well as verification of the functioning of the wartime reserve replacements.
- A Counterintelligence Support Group of two to four officers from the Military Internal Service. This group was responsible for counterintelligence support of the institutions of the Polish General Staff. Activities of this group were directed personally by the Chief of the

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Military Internal Service.

- A Political Support Group of three to four officers from the Main Political Directorate of the Polish Armed Forces. This group was responsible for the propaganda framework of the exercise (e.g., publication of field newspapers, leaflets, bulletins, organization of meetings of "friendship and brotherhood of arms", and encounters between soldiers and the civilian population).
- A Research Group (at times, two or three such groups). The research groups were composed of officers-scientists conducting specific problem research.
- A Civil Defense Group of five to six officers from the National Civil Defense Inspectorate. This group was responsible for the involvement of the Civil Defense units in support of military activities (usually to provide assistance to the troops in recovery from the effects of attacks by weapons of mass destruction).
- A Group from the Ministry of Internal Affairs (about three officers). This group was responsible for exercise cooperation (with the armed forces) of the Ministry of Internal Affairs troops (militia, detached ground and sea forces of the Border Defense Troops, et. al.).

3. The Umpire Team

The Umpire Team was composed of a relatively large group of generals and other officers spread out among the exercising commands, staffs and troops, representing primarily the exercise management. The team consisted of:

- Umpires attached to exercising commands and staffs.
- Umpires attached to units.
- Field umpires.

In front exercises of the "LATO" type, the most important group of umpires was the one assigned to the exercising commands and staffs. The role and tasks of the umpires changed as the management methods for large skeletal exercises in the field in the Polish Armed Forces improved. Traditionally, following the Soviet example, the umpires who were constantly with the exercising commanders and staffs fulfilled two basic functions:

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- The formulation of operational and combat situations by transmitting various informational data to those exercising, in conformance with the scenario about the enemy and friendly forces.
- The supervision and evaluation of the behavior and decisions of those exercising, as well as an assessment of the correct execution of tasks, i.e., conformance with field manuals and the principles of operational art. The umpires doled out awards (for recognized successes in operations) or punishments (for delays in achieving aims and operational tasks; for causing large losses in personnel and equipment, etc.).

In the early 1970s, because of difficulties in directing "the exercise combat field" by the staff, a concrete organizational and methodological innovation was introduced, involving the dispersal of umpires over large areas. This innovation shifted the main responsibility for the formulation of operational and combat situations from the umpire teams attached to the exercising staffs to the exercise management role-playing group, deployed near the exercise management staff.

It was a rule that, to each exercising element (front, armies, divisions), the following were attached:

- An umpire attached to the commander. This umpire also served as the chief umpire of the element.
- An umpire attached to the staff. He served as the deputy to the chief umpire.
- A group of technical umpires, which was assigned to the most important organizational elements of the staff (for instance: operational, reconnaissance, antiaircraft defense troops, rocket and artillery troops, etc.).

The overall number of umpires could not be smaller than the number of command posts established by the exercising elements. Thus, if the front deployed a Command Post (SD), an alternate Command Post (ZSD), a Rear Command Post (YSD), and a Combined Command Post of Antiaircraft Defense and Fighter Aircraft Front Command, then there had to be a minimum of four umpires, one for each command post.

Generals and officers who were of equal (or sometimes senior) rank and position to those exercising were selected as exercise umpires. Thus, the umpire attached to the Front commander would be one of the Vice-Ministers of National Defense (usually a general who previously had served as a front

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commander), and the umpire attached to the Front staff would be a general who previously filled the T&E position of the Front's Chief of Staff, etc.

Unit umpires were appointed to supervise the activities of exercising units at division, brigade and lower levels. As a rule, each exercising unit had at least one umpire. At larger units (i.e., division), there would be a senior umpire and several other umpires.

Umpires attached to exercising commands and staffs, as well as unit umpires, were required to provide to the exercise management, in compliance with a plan, oral or written reports evaluating the activities of the exercise players.

Field umpires were appointed to direct real-time, one- or two-sided practical military activities in the field, based on the exercise scenario. They were not attached to any units, but rather to a specific area of planned military activity. They influenced the conduct of those activities chiefly by transmitting to the exercise players agreed visual signals or agreed symbols: "killed", "injured", "destroyed", or "damaged."

4. Role-Playing Groups

In the improved system of conducting large skeletal exercises, the role-playing groups assumed the role of the links of wartime structures of front, army, branches of armed forces and military districts--elements which were not called out to play the exercise, but which were necessary to create realistic command relations. In addition to the routine introduction of skeletal commands to the exercise, and staffs of the combined-arms army, air army, and a limited number of combat units, there were hundreds of tactical organizations and units in the wartime structure of the Front. These were armored and mechanized divisions, an airborne division, a sea-landing division, air force divisions, reserve divisions, reserve regiments, operational-tactical rocket brigades, artillery brigades, antiaircraft defense missile brigades, engineering and chemical regiments, brigades and reconnaissance units, and troops of electronic warfare, as well as a large number of rear service units of various types and designation which were not called for the exercise. The role-playing groups played specifically the roles of non-participating divisions, brigades and sometimes battalions.

In the late 1970s, for front exercises of the "LATO" type, 50-70 such groups were called, involving up to 200 or more officers. Each role-playing group, usually composed of three to six officers, played a role of one or several tactical

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organizations or units. For instance, one of the groups might play the role of the command and staff of a mechanized division; another, the role of four operational-tactical rocket brigades; still another, the role of several special groups active in the rear of the enemy, etc. All role-playing groups were sited in one location, most frequently in tents and located at an airfield near the exercise leadership staff which directed their activities. Exercising commands and staffs maintained communications with the role-playing groups, making it possible for them to practice realistic command over units participating in their wartime structure.

B. FROM WHERE WERE EXERCISES DIRECTED? HOW WAS THE MANAGEMENT COMMAND POST ORGANIZED?

Large exercises on the level of front, army or branch of armed forces (with the exception of the National Air Defense Forces) were generally directed from one, two, or occasionally three selected sites of work of the management. At times, these sites were called Management Posts.

In exercises organized by the Polish Ministry of National Defense, the management of exercises was nearly always deployed to air bases which were located centrally in relation to the exercising staffs and forces (if this was possible), or as close as possible to the exercise players. In instances in which the players distanced themselves considerably from the deployment of the management, as the dynamics of the operations developed, the management posts would be moved, following the path of the field command posts of the exercising elements. Staying as close as possible to those exercising was dictated by organizational (easier communications), and economic considerations (lower costs of deployment of communications systems, and use of means of transportation). Air bases were preferred, since they offered the best conditions for frequent transfer of the exercise management personnel, by aircraft or helicopters, directly from the place of work, without the obvious appearance of columns of vehicles approaching air bases with high-ranking military dignitaries. Air bases were also ideal for deployment of large fields of tents in which the role-playing groups were located.

The Soviets were not in favor of using unprepared ad hoc installations for this purpose. For their exercise management, they selected for their headquarters' locations the well-protected installations of their military districts or military groups (Group

¹⁶ As a rule, exercises of National Air Defense were directed from the permanent command posts of these forces.

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of Soviet Forces in Germany; the Northern Group of Forces; Central Group of Forces), equipped with stationary, complex communication systems. In principle, the Soviets never used facilities of the NSWP armed forces.

Exercise management posts were provided only with office-type equipment. Usually, spaces were designated in installations vacated by the local personnel for the compact management group and organizational staff elements. One of the largest areas at the management site was usually occupied by the operational team of the staff. In this area, decisions of those exercising were followed and analyzed on the spot, as were the impacts of these decisions and the preparation of the most important decisions concerning further conduct of the exercise. At this location was a huge work-map, on which all of the important data concerning the conduct of the exercise were posted. The Soviets usually used a normal map, colored pencils and color markers (or at times fluorescent paints). The Germans and the Czechs used maps with magnetic backing, which allowed unrestricted movement of drawings and tactical symbols. The Poles used special stands with maps covered with transparent material, which facilitated a rapid depiction of the up-to-date situation.

A communications center normally was deployed in the vicinity of the Management Post. This center was linked to the stationary communications system of the Ministry of National Defense. Special connections to the classified Soviet government communications system on high frequency ("W. Cz") and secure military communications ("Ti") were attached to the command posts of front, armies, branches of armed forces and the military districts, for the purpose of directing an exercise. The secure military communications system was linked to one headquarters echelon below (i.e., as low as division). In addition, enciphering stations and special field post office nets also were deployed. Management command posts did not have their own computer center, but were connected by special data transmission cables to the central computer centers of the Ministry of National Defense.

Role-playing groups which played the roles of elements subordinated to those exercising in the front exercises of the Polish Armed Forces were normally deployed in the vicinity of the management post. Security usually was beefed up around each management post. The entire installation was protected by increased guard posts and specialized posts for the protection of specific work and administrative areas. Often, within a radius of several kilometers around the management post, military patrols and patrols of counterintelligence personnel in civilian clothing were deployed. Military traffic control personnel also were deployed on access roads. All personnel of the management

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post were provided with special passes authorizing entry to the installation and its specific components.

C. HOW WERE EXERCISES STARTED?

The beginning of nearly all exercises was preceded by training briefings by the most important functional personnel involved in the management of an exercise, such as the chief of organizational elements of the management staff, chief umpires, chiefs of simulation groups, role-playing groups, inspection and control groups, research groups, etc. Briefings were conducted just prior to the beginning of exercises in order to retain secrecy of exercise premises. At these pre-exercise sessions, participants were informed about the "Leading Thought of the Exercise" and the framework of its conduct. In addition, specific, detailed instructions for action and necessary documentation were issued. After the briefing, the participants moved directly to designated units or their places of work.

In principle, all exercises began routinely, with the introduction into the exercising elements of a higher state of combat readiness and conversion of the units from peacetime to wartime structure. In front and army exercises, this conversion was especially necessary, since in the peacetime structure of the armed forces of the Warsaw Pact (with certain exceptions in Soviet forces), some elements did not exist, for all practical purposes, but were to be formed only in the time of threat within the framework of deployment of the wartime command system. In reality, every national armed force of the Warsaw Pact had their own specific procedures for conversion from peacetime to wartime command structure.¹⁷ In Poland, three stationary command posts of the Ministry of National Defense were formed, (PPWCP, CP-1, and CP-2)¹⁸ based on the peacetime structure of the Central Institutions of the Ministry of National Defense, as well as the Command and Staff of the Front, in three mobile field command posts (CP, ACP and RCP).¹⁹

¹⁷ See Annex 2: Diagram of Conversion of Polish Command System From Peace to War.

¹⁸ PPW - Command Post at the present place of work. (Polish: DMP).
CP-1 and CP-2 - Command Posts 1 and 2 (Polish: SD-1 and SD-2).

¹⁹ CP - Command Post (Polish: SD).
ACP - Alternate Command Post (Polish: WSD).
RCP - Rear Command Post (Polish: TSD).

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At the same time, on the basis of peacetime military districts, appropriate commands of combined-arms armies were formed, as well as three mobile field command posts for each army (CP; ACP; RCP), and respective commands of wartime military districts (three stationary CPs, similar to the Ministry of National Defense in each military district). The command for Poland's peacetime air forces detached from itself a command for an air army, (after 1980, the "Command of Front air forces"), three CPs, and the Office of the Wartime Chief of Aviation Support, which were included in the CP of the Ministry of National Defense.

In the USSR, commands of military districts transformed themselves into the commands of fronts and into wartime military districts. In the GDR, based on the military districts, commands of corps and headquarters of wartime military districts were formed. In Czechoslovakia, the Front headquarters was formed from the Western Military District headquarters.

Forming of the wartime command structure for exercise purposes took place in principle in accordance with actual plans and principally under exclusive control of special organizational TO&E cells of general staffs (in Poland, the responsible office was the Department of Combat Readiness and Command of the Operational Directorate of the Polish General Staff).

Wartime command organs at the operational-tactical level of the armed forces of the USSR, GDR and probably Czechoslovakia were, in principle, deployed in hardened command posts constructed near their permanent peacetime locations. After a certain time period (usually, after the end of operational planning), the command elements were moved from these sites to the exercise areas. The Poles, who did not have at their disposal appropriate permanent structures, deployed the newly formed command organs directly into the exercise areas. If the exercise commenced by an updating of the exercise operational plan, or by a complete replanning of the operation, then some of the personnel--along with the Front or army commander--remained at the site of permanent location until the end of the planning process, at which time they were transferred by air (aircraft or helicopter) to the field command post deployed in the exercise area.

Usually, following deployment of the wartime command system (sometimes parallel with its deployment), full combat readiness would be ordered for the exercising units. Reaching full combat readiness took place by various methods: selectively, by selected groupings of units, or by all exercising units simultaneously; gradually (in secret), or in general alert form. In every case, however, occupation of the alert areas

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foreseen by real plans or actual mobilization areas was strictly forbidden. Units deployed for exercises, as a rule, were subjected to "Peacetime Limitations," based on the principle that the commander who ordered a full combat readiness defined certain undertakings which were foreseen by the plans but which did not need to be implemented. For instance: Do not take along your supplies of "iron reserves" (Reserves of vehicles, equipment, or supplies "untouchable" except in wartime); do not call reserve personnel and transportation means to active duty; do not take along wartime reserves of technical-material means, etc.

D. HOW WAS THE EXCHANGE (ROUTING) OF DATA ORGANIZED IN LARGE SKELETAL EXERCISES? DID THE MANAGEMENT OF EXERCISES AND EXERCISING ELEMENTS USE THE SAME COMMUNICATIONS SYSTEMS AND COMMAND PROCEDURES WHICH WERE FORESEEN FOR WARTIME?

Arrangements of communications systems for command and management, as well as the circulation of data in exercises were aimed at two, in a sense mutually exclusive, goals. The first was the use of typical systems, management procedures and command procedures approximating actual crisis or wartime conditions, with the intention of their verification and improvement. The second goal was the concealment of these real systems and procedures from identification by the NATO side.

As a result, actual command communications systems and procedures were used mainly in instances which guaranteed their protection against the opponent (NATO), or when other solutions made circulation of data necessary for the conduct of the exercise impossible.

At the time of the conversion of exercise elements from peacetime to wartime footing, stationary communications systems of the NSWP defense ministries and of the CAF of the Warsaw Pact were used, along with the actual procedures to be applied in such situations. In exercises organized by the Polish Ministry of Defense, alert signals designed for increased state of combat readiness were not transmitted via the management organs of the exercise (umpires; inspection-control groups), but rather via the Operational Duty Service of the General Staff, acting according to the exercise plan and using an automated alert system ("TESA-Tg": a telegraphic system). For the purpose of security protection of the alert processes from the opponent (NATO), telephonic or radio ("MIRT") components of the complex alert system were never used.

In joint exercises organized by the Combined Command of the CAF and the Soviet Ministry of Defense, procedures were the same, with the exception that the Operational Duty Service of the Polish General Staff acted merely as an intermediary in the

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transmittal of signals originating with the Soviet General Staff.

During the period of operational planning (usually during the first one or two days), the most important content of an exercise was played in closed, controlled conditions, with maximum restrictions on the use of technical communications means. Nearly all data necessary for operational planning were handed by the umpires to those exercising in writing, in the form of premises. In exceptional instances, some supplementary (or less important) information was transmitted by code. Submission of the decisions of those exercising (operational plans), as well as the transmittal of tasks (directives and orders) to lower echelons took place exclusively via personal contacts, or in the form of documents transmitted via a special field post office.

During the play of the dynamics of an operation, the exercising commands and staffs directed the dynamics of the activities based on the operational plans prepared by them and approved by higher echelons (in the case of fronts, by playing the role of the CINC of the Western Theater of Military Operations).²⁰

At operational levels (i.e., front and army), these plans were updated or amended with the "development of the situation at the front," usually once every 24 hours. This "development of the situation at the front," based on a previously prepared scenario, was created by the exercise management staff and passed to the players via umpires and role-playing groups, and also via transmittal of additional tasks to those exercising. (A conceptual scheme of the data circulating system in a two-level, front-army skeletal exercise is shown at Annex 3.)

The informational data circulating system for Soviet and NSWP exercises was basically the same; differences concerned only the deployment of the role-playing groups. According to the Soviet method (illustrated by the diagram at Annex 4), the role-playing groups were deployed in the vicinity of exercising elements. These groups usually had at their disposal rather modest communications means (most frequently, cable), via which they exchanged data with exercising commands and staffs. They did not, however, maintain constant contact with the exercise management staff. If any changes occurred in the plan of the dynamics of operation (action), the leaders of the role-playing

²⁰ The plans for the initial front operation, encompassing action at the depth of 600-700 km, were intended for 12-14 days. The front operation included two army-type operations, each encompassing action at the depth of 300-400 km, conducted during 6-7 days.

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groups were called in by the management staff and given new instructions for play.

According to the Polish method (illustrated in the diagram at Annex 5), the role-playing groups were located in the area of the Management Post, where they were directed by personal contacts and on a current basis. As with the Soviet variant, the role-playing groups had limited communications means (usually, the classified "Ti" system) via which they received orders for action from the exercising commands and submitted combat reports from the "field of battle" to these commands.

In theory, for the period of the play of the operational dynamics, all exercising elements had the same command and control communications systems deployed and active which they would have at their disposal in wartime. Using these systems for exchange of data was, however, limited by numerous restrictions. Technical limitations based on the use of only designated radio frequency bands, as well as the appropriate selection of means which should be used at any given movement for the transmittal of data were the responsibility of communications elements. Further, users of the communications systems were subjected to other limitations, based on the stringent criteria for selection of data which could be transmitted via technical communications means. All data related to the exercise were considered "Secret," and could not be transmitted in the clear. Important data could be transmitted only via the Soviet government classified communications cable net "Wcz" (high frequency),²¹ or via encoded messages. In less vital instances, the military classified telephone communications system "Ti" could be used.

Classified command methods (signal tables, coded maps, etc.) were required when using non-secure communications. Communications and counterintelligence organs strictly monitored adherence to security principles and, in instances of violations, offenders were subjected to disciplinary action.

Fear about disclosure of classified information, the burden of the use of complicated methods of classified communications and the lack of familiarity with the use of technical communications means created an organic hesitancy among the command and staff personnel about using those means, especially

²¹ High frequency transmissions via cable (Wcz) were considered secure, since the system precluded release of signals into the air. Telephone equipment used for this communications system had to be placed on another desk away from other telephones.

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radio. Despite official pressure to use the TO&E means of communications, users at all levels were reluctant to do so. According to estimates by the Polish General Staff, it appeared that in two-level (front-army) skeletal exercises, the level of use of the technical means of communications for data exchange²² was:

- In communication between the management staff and the Front, about 3-5 percent.²²
- In communication between the Front and armies, 5-10 percent.²²
- In communication between armies and their tactical elements and units, 15-20 percent.²²

The highest use, reaching 80-90 percent use of communications systems, was noted between exercising staffs and the actual units or their substitutes, the role-playing groups.

Another factor in the low level of use of the technical communications means was the very type of skeletal exercises in which the greatest attention was paid not so much to the commanding of forces (which, as a rule either were not there at all, or were present in limited numbers), but to the process of making decisions. These processes were analyzed and evaluated, chiefly on the basis of personal contact at the field command posts. The compact exercise management team devoted up to 90 percent of its time to this effort, listening to reports of various functional personalities of exercising staffs (reconnaissance and operational elements, arms of troops and services, etc.), presented on the subject of their estimate of the situation, as well as recommendations for commander's decision and the final decisions of the commanders.

In sum, the principle exchange of data in command and staff and skeletal exercises, even during the play of the operational dynamics, took place via personal contacts and exchange of written documents, with only an insignificant part via technical communications means.

²² Data from memory.

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VI. EVALUATION OF EXERCISES

A. HOW ARE EXERCISES EVALUATED? BY WHOM?

Evaluation of exercises was one of the most important tasks faced by the management of the exercises. The process consisted of evaluations of activities of those exercising in the context of the challenges by the potential opponent (NATO), and the possibility of meeting these challenges by those exercising. Evaluations also included assessment of the application of required doctrinal norms and principles by those exercising. Evaluations of the effectiveness and efficiency of friendly (Pact) armaments systems and technology were avoided.

In tactical and operational-tactical exercises with troops, an evaluation presented no significant difficulties, since the results of the activities of the units could not only be observed but frequently measured, using the mandatory effectiveness and efficiency norms of tactical combat. Criteria of evaluations based on these norms were established for nearly all spheres of military art, beginning with alert departure from permanent locations, through the crossing/forcing of water obstacles, to the firing of various types of weapons, and air bombardments. Preparation of summary evaluations of certain exercises was guided by mandatory instructions for the conduct of inspections and by control headquarters.

Evaluations of command and staff and skeletal exercises were more complicated. In such cases, evaluation depended on difficult-to-assess talents of all staff teams and commanders in the fields of planning, organization, and conduct of contemporary operations. In this respect, there were no established methods; every organizer of an exercise approached this task in a different manner, attempting to gather as many facts as possible for the formulation of exercise evaluation.

The most frequently used methods of gathering information for exercise evaluation were:

- Constant, direct observation of the activities of exercise elements in various combat-like situations.
- Analysis and critique of exercise decisions.
- Empirical research of selected command problems.

Observations and feelings of the compact management of an exercise were of decisive significance. An exercise manager and his deputies, including the chief of staff, devoted 80 to 90 percent of their time (about 12-15 hours daily) to visiting units

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of those commands and staffs which were exercising. During such visits they listened to reports and briefings from the most important functional personnel (intelligence; operational; arms of troops and services; technical and quartermaster rear) about the subject of evaluation of disposition and proposals for decisions, as well as the final decisions of commanders. It was a general rule that each exercising element be subjected to such an examination at least once, and often two or three times, during the exercise. Umpires conducted constant, round-the-clock observation of all exercising elements and presented the results of their perceptions to the management of the exercise in their daily and summary reports at the end of the exercise.

Analysis of the decisions taken by the exercise players was the responsibility of the management staff. These analyses were prepared usually on a 24-hour cycle, and were based on a daily operational report (sent by the exercising staffs) and reports of the umpires. Analyses of the decisions of those exercising, along with its critique, were presented to the compact exercise management during the daily briefings at the end of each exercise day.

The so-called "designated forces" and role-playing groups were chiefly used for empirical research. "Designated forces" were symbolic units; however, they also were considered representative units, by means of which a study of the implementation of decisions undertaken at the high level (front; army) could be made. Thus, for instance, for analysis and evaluation of command via front- and army-level of nuclear means, the role of "designated forces" could be played by elements of one or several operational-tactical brigades (i.e., one firing battery and one technical battery), a portion of one technical field rocket base (one or two technological elements), as well as a command and staff element of one armored or mechanized division with its organic unit of tactical rockets. Unit umpires were assigned to all elements of "designated forces," with the main task of following what kind of orders reach the implementing elements and how these orders were carried out.

The function of the role-playing groups in empirical research was significantly smaller. Even so, they were a good source of information about which orders for the exercising commands and staffs were transmitted to the subordinate forces, when these orders arrived, and how quickly and in what way the exercise players reacted to the situations arising on the field of battle. Managers of role-playing groups were required to present reports of this type to the exercise management.

An overall and final evaluation of exercises was the responsibility of managers of these exercises. They did this after the completion of exercises, at special summary critiques.

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with the participation of the management cadre of the exercising elements and invited guests, among whom often were the First Secretaries of the Party and other Party and government dignitaries. The formal character of the summation was not without influence upon the content of announced evaluations. In most instances, the summations were subordinated to political propaganda goals and many objectively factual observations, gathered with great difficulty (especially the negative aspects of exercises), were never brought up. Summaries (evaluations) of exercises were routinely published in classified special information bulletins, or in special publications dedicated to specific types of exercises, with a recommendation for commanders to take advantage of such materials in the process of training of their forces. Certain evaluations of exercises, usually supported by observations conducted by the representatives of the Pact's Combined Command, were reflected in the directive of the CAF CINC for training for the subsequent training year. Short reviews of exercises, based on the same principles, were published in the "Review of Staff and Technical Committee of CAF" (Sbornik shtaba i Technicheskovo Komiteta Ubedyinyonnikh Vooruzhennikh Sil).

B. WERE THE EXERCISES EVER HALTED, TO REPEAT THEM ONCE MORE, IN ORDER TO REACH A CORRECT RESULT, OR TO PROVIDE INSTRUCTION TO THOSE TAKING PART?

At the level of sub-units, i.e., up to and including battalion, this was one of the typical and frequently used methods of training. Once in a while, certain episodes of regimental exercises were halted and repeated once more. At the tactical level (i.e., division), such reruns were implemented probably only during the time frame of preparation for Pact exercises of the "SH'CHIT" (Shield) type. These exercises, despite a great-to-do about them, were not exercises but rather an assembly, calculated for demonstrative show. For these shows to appear in their best light, certain segments had to be rehearsed many times.

There were no known instances of halting and repeating operational-tactical exercises at the levels of front, army, or branch of services. In case of shortcomings or weaknesses in the work of exercising commands and staffs at those levels, managers limited the matter to a reprimand, recommending correction of deficiencies by a designated date. In more glaring cases--errors on a large scale, or derelictions--the exercise would be lengthened, including in its scenario some additional, repetitive type of episodes. Between 1964 and 1981, there were two such instances known. The first was during a joint front exercise "NAREW-64," when an accidental firing of three operational-tactical rockets with "theoretically" armed nuclear warheads occurred because of an error in signals. The angry manager of

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the exercise, Polish Marshal SPYCHALSKI, on that occasion extended the duration of the exercise by 48 hours, and changed the previously prepared scenarios completely. The second instance took place seven years later, during the "LATU-71" exercise. On the last day of the exercise, in the euphoria of success, the exercising commands had begun to stand down, having halted the commanding of subordinate forces and begun preparations for return to the barracks. Also in this instance, the manager of the exercise (General JARUZELSKI) extended the duration of the exercise by one day, during which he recommended a replay of one additional episode of planning of successive operations, which was quite onerous for those exercising. There were no known instances of similar cases in Soviet exercises.

- C. WERE SOME EXERCISES CONSIDERED AS AN OPERATIONAL EVALUATION OF UNITS AND COMMANDERS? WERE THEY EVER MANIPULATED TO ASSURE SOMEONE'S FAILURE OR SUCCESS? WHAT HAPPENED TO THOSE WHO FAILED INSPECTIONS?

Tactical and operational-tactical exercises were considered as the highest verifier of combat effectiveness of units, tactical elements and operational-tactical (as well as operational) maturity of their commanders and staffs. Evaluations resulting from such exercises, next to inspection and complex-control evaluations, were the basis of the combat characteristics of a unit. These evaluations were entered into the chronicles of a unit, and were included in personal performance ratings of commanders and chiefs of staff.

Behind political-Party activities, exercises were the second most important basis for selection of command cadres. There were tens of examples of shining military careers begun or accelerated just by exercises, or reverse examples when exercises were the beginning of the end of a career of commanders who were not always bad or untalented. Rises and falls of careers had, however, nothing to do with the arrangements of exercises from the standpoint of someone's purposeful failure or success. Though such eventualities are difficult to exclude, in general, exercises were primarily (if not exclusively) arranged from the standpoint of aims and training tasks. On the basis of each normally programmed exercise, however, it was possible to arrange someone's success or failure, and this was a frequent practice. If one wanted to help or promote someone (and this happened most often), then he was simply briefed on the scenario of an exercise, informed when and how he should undertake a decision, and (not infrequently) prepared studies were provided to him which he had to remember by rote and implement during the exercises. This practice occurred actually on all levels, although most often in situations in which commanders wanted to support their preferred candidate for approval for a higher level post, or for the first general-officer rank. The author of this

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study is aware of at least more than 10 instances in which the chiefs of operational units of military districts and branches of armed forces prepared, as the authors of exercises and at the recommendation of their commanders, prearranged successes--nearly always with intended results--for the candidates for division command and for the rank of brigadier general. The author of this study, as the author of many exercises, was himself the beneficiary of many such similar "honors," preparing at the recommendations of his superiors' successes for certain personalities of the central level, military districts, and branches of armed forces.

Cases of arranged failures for someone were a rare occurrence. If something of this sort did take place, then it sufficed simply to order an exercise or to conduct an unexpected inspection, and the rest was taken care of by more demanding and often one-sided criteria of evaluation. The first negative (unsatisfactory) evaluation during an inspection test usually resulted in some form of reprimand, with a recommendation to correct deficiencies in a prescribed period of time. If, during the next inspection an unsatisfactory rating was repeated, the commander was transferred to a lower duty position, most often in military training or in the forces of the territorial defense.

D. WHEN SOVIET AUTHORITIES EVALUATED EAST EUROPEAN PERFORMANCE, HOW SPECIFIC WERE SOVIET REMARKS? DID THE SOVIET AUTHORITIES EVALUATE PERFORMANCE AT THE LEVEL OF REGIMENTS OR LOWER?

The most typical instances in which the Soviets evaluated performances (state of combat readiness for war tasks) of their allies were:

- Inspections and control.
- Joint exercises, organized by the Soviet side.
- Summaries of a training year of the Combined Armed Forces of the Warsaw Pact.

In each category, the means of evaluation, the character of the content, and the remarks differed substantially.

During an inspection and control, the Soviet side (the Combined Command) selected specific, representative units. For ground forces, for instance, the representative units might have been command and staff elements of one peacetime military district, one armored or mechanized division, one artillery brigade, and several independent units of types of armed troops (engineering, antiaircraft, chemical, etc.). In all units, combat readiness and mobilization readiness were routinely

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checked and evaluated separately, as were the morale-political state, combat and technical training, and knowledge about foreign forces, etc. A decisive factor in an evaluation was the execution, within the framework of an inspection exercise, of a tactical task typical for the specific unit (e.g., for an armored division--an attack from a march with a water barrier crossing; for a brigade or an engineering regiment--construction of a crossing bridge or ferry-crossing, etc.).

For each inspected unit, separate reports were prepared. These reports contained a detailed analysis of the state of inspected activities and their evaluations on a five-point scale, a final summary evaluation for each unit, and post-inspection recommendations.

During the critique of joint Warsaw Pact exercises, the Soviets usually focused their remarks on the resolution of problems during the exercises rather than on the evaluation of specific allies or specific levels of command.

In front- and army-level exercises, the most frequently critiqued problems were:

- Conversion of armed forces from peacetime to wartime and deployment of command systems.
- Planning of an operation.
- Deployment of strategic, operational-tactical and combat groupings in the Theaters of Military Operations in specific operational directions, with special emphasis on redeployment of forces over large distances, under conditions of strong enemy reaction from the air.
- Conduct of electronic warfare.
- Conduct of air and air defense operations.
- Movement to offensive (attack) operations on selected axes, and seizing of the initiative in the whole sector of action.
- Cooperation among various branches of armed forces, and arms of troops and services.
- Organization for a breakthrough of prepared enemy defenses.
- Destruction of surrounded enemy forces.
- Execution of the first mass strike with weapons of mass destruction.

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- Recovery from the effects of mass destruction weapons.
- Development of offensive (attack) operations under conditions of two-sided use of nuclear and chemical weapons.
- Work by staffs in various operational and combat situations.

Specific problems were critiqued in relation to situations played, chiefly in the context of challenges on the part of NATO. In addition, evaluators critiqued the reactions of those exercising to such challenges, their decisions, as well as means of implementation through various exercising levels, often in vertical arrangement (from the highest to the lowest level), and horizontal (examples of resolutions of the same problems by various elements of the same level, i.e., various armies or divisions).

In the Soviet system of analysis and evaluation of East European performances, the most important element was the annual, official summary of the training year of the Combined Armed Forces. This summary was presented by the CINC of the the CAF in his briefing at the meeting of the Pact Military Council, and was included in the written "Directive of the CINC for the Training of CAF," issued at the same time.

The briefings of the CAF CINC and his directives contained on one side the synthetic evaluations of training gains for the past year; on the other, tasks for the coming year. Evaluations and tasks in specific training areas (for instance, combat and mobilization readiness, training of generals and officers, training of ground and air forces, air defense, fleets, rear, etc.) made reference to the Combined Armed Forces as a whole, and not to particular national armies. At times, if one of the NSWP armies distinguished itself by a particular achievement, the case would be mentioned by name. If the Soviets wanted to point out someone's shortcomings or weaknesses, they did this in an impersonal fashion, hoping that the addressee would recognize himself. The Soviets specifically criticized only the Romanians, mainly Romanian isolationism, which in the Soviet perception made appropriate play of assets and forces of air defense of the southwestern flank of the Warsaw Pact impossible.

E. WHAT ROLE DID SOVIET EVALUATIONS PLAY? HOW DID THE GENERAL STAFFS REACT TO POSITIVE OR NEGATIVE SOVIET EVALUATION?

Everything depended on the general attitude of the Soviets toward the specific countries, and sometimes toward functional

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personalities. The Romanians never agreed with the Soviet evaluations and seemed to ignore them totally. The Bulgarians, the Germans and the Czechs--although for different reasons--accepted (nearly blindly) all that originated with the Soviets. The Poles and the Hungarians listened with attention and nodded, then reacted in a fashion most convenient for them.

In Poland, one of the most serious concerns was the result of inspections and controls. Comments included in inspection reports were carefully studied by the leaders of the Polish Ministry of National Defense. Often, based on these comments, the Polish General Staff prepared a central plan to correct the shortcomings and deficiencies. Units which were weaker were particularly singled out. Certain post-inspection conclusions and recommendations which the Polish General Staff considered proper and purposeful would be integrated into the Ministry of National Defense training order, or their inclusion would be recommended for training directives of the commanders of military districts and branches of armed forces.

The critique of Warsaw Pact exercises was treated by the Polish General Staff as the most authoritative, latest example of Soviet war doctrine which was to be adopted by the Polish Armed Forces. Soviet remarks, however, were approached with flexibility. Comments and suggestions which did not require considerable financial expenditures and which could be implemented within the framework of the existing organizational structures generally were accepted without reservation, and attempts were made to satisfy Soviet demands.

In instances which resulted in more significant economic burdens or deeper structural changes of the armed forces, a wait-and-see attitude was usually adopted. If the Soviets exerted subsequent pressure, the Polish General Staff presented the case, with appropriate recommendations, for decision by the Minister of National Defense, or at times by the Prime Minister of the Polish Government or the Committee of National Defense. There are many such examples. One such case involved the issue of methods of development of the wartime command system of armies and the Polish Front. After 1977, on every possible occasion but especially during exercises, the Soviets reproached the Poles that they were improperly deploying the wartime command system of these elements. Their reservations concerned two issues. First, they were against the Polish practice of the formation and deployment of command and staff elements of the Front from the Central Institutions of the Ministry of Defense. The Soviets considered that this wartime front organ should be formed in a fashion similar to the Soviet Union and Czechoslovakia; that is, from one of the military districts.

The second issue concerned the site of wartime deployment of

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the Polish Front and its armies. According to the Soviets, commands and staffs of the Front and armies should have been constructed, in the vicinity of their peacetime locations, permanent, hardened command posts equipped with command and communications means which could be rapidly manned by proper personnel and could take over the command of forces. The Poles were reluctant to become involved in an expensive program which, in their opinion, would be of little use in wartime. Therefore, they formed the command posts near the sites of the permanent location, but with mobile means (chiefly combat command vehicles and staff buses), and immediately deployed into operational directions.

Despite the obvious weakness of the Polish solution, prior to late 1981, at least, the Polish General Staff successfully resisted Soviet pressure, and stuck to its solution.

Another example concerned Soviet suggestions for the wartime formation and deployment of additional reserve divisions, and a reserve command and staff element of an army. The Polish General Staff did not want to agree to this; however, under Soviet pressure, the Poles had to submit the issue for the decision of the prime minister, who in this instance took the side of the USSR.

Soviet remarks, reported in the summary of the training year, were adapted by the Polish General Staff to the conditions of the Polish Armed Forces, and were included in the most important training documents of the Ministry of National Defense (in the MND orders for the training of the PAF for the given year, and in the plan of the most important training undertakings of the Polish armed forces). In accepting and implementing the Soviet evaluations and tasks, the personnel of the Polish General Staff did not, however, evince any great zeal, and it was not unusual to see the greater part (at times 60%-70%) of the Soviet commands ignored completely.

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VII. VIEW FROM THE WEST

- A. HOW QUICKLY COULD A PACT EXERCISE BE PREPARED TO HIDE ACTUAL OPERATIONAL ACTIVITY (E.G., AN INVASION OF IRAN OR ROMANIA)? WOULD THERE BE DIFFERENCES BETWEEN THIS AND LONG-TERM PLANNING EXERCISES? WOULD PLANS OF PREVIOUS EXERCISES BE AVAILABLE TO REPEAT A FALSE EXERCISE, OR TO ACCELERATE PLANNING?

If the organizer and the chief planner of an invasion, the Soviet General Staff, considered such an exercise necessary for any reason, then preparation would not take too much time, either to plan an invasion (if such a plan were not already on hand) or to review or update an existing plan. From previous experience, it would seem very unlikely that any central exercises would be prepared in conjunction with an invasion plan. Instead of just one, we would certainly have to consider a range of false, simulated, demonstrative and also real exercises being prepared by various elements of the invasion forces, subordinated to the aims of invasion.

Viewed chronologically, these could be:

- 1. False exercises, under the cover of which units would be brought up to wartime level, or to the level defined by an invasion plan, and the ultimate adjustment of their structure of armament and equipment for the expected tasks.

Taking into consideration the peacetime manning levels of Soviet units stationed in the USSR as well as units of other forces of the Warsaw Pact which could be used in an invasion, one should expect that 30 percent would be needed to provide required manpower in the ground forces alone. Depending on needs, this bringing up to the desired strength level could take place by shifting personnel from one unit to another, by calling up reserves for exercises or for training, or even by a partially hidden mobilization. The possibility also exists that the Soviets could use a combination of these means. For the purpose of avoiding publicity and in order to keep the operation hidden for as long as possible, there probably would be no preparations for central exercises. Replenishment and eventual reorganization of invasion units would be entrusted to the commanders of Soviet military districts and to the national commands of Warsaw Pact states (should they be required to provide forces for invasion), who would execute the operations under the cover of local, routine exercises. The use of exercises as a pretext does not limit the operation to exercises of any kind prepared or conducted at the level of military districts or the national commands. In 1968, during Pact preparations for the invasion of Czechoslovakia, the first echelon of the intervention forces assigned from the Polish People's Republic was built up to around 90 percent strength by the

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transfer of personnel from other units, with only 10 percent coming from the call-up of reserves for exercises. The buildup of the Polish intervention forces (an army composed of two divisions) took place under a pretext of exercises, though no exercises actually were prepared and conducted for this purpose. The buildup of the second echelon, by means of reserve call-up, was begun at the movement of the entry of Warsaw Pact forces into Czechoslovakia. This second-echelon build-up, however, was suspended in view of the rapid success of the invasion.

2. Practical ("OJT type") exercises of invasion units, replenished to a new personnel level or fleshed out by mobilization.

According to Soviet training doctrine, newly fleshed out units, upgraded by mobilization or via reorganization of other units, should undergo a brief cycle of practical, OJT training exercises, from the lowest level up through division. Only after such a division-level exercise was a unit considered fit for combat. These exercises were conducted in military training areas, and their duration depended on the situation. On an average, they were conducted for periods of time ranging from 24 hours up to a few days. These exercises were organized at division level. Exercises of specific units were conducted by their actual commanders, and in accordance with their own plans, with central and intermediate levels exercising only general supervision.

3. Actual training exercises and training for the preparation of invasion forces to execute planned tasks.

If there were enough time, the invasion forces would be subjected to political indoctrination, and would undergo special training and exercises preparatory to action under conditions which they might encounter during the invasion. The program for this type of training and exercises would be centrally prepared, although implementation would be entrusted to lower levels. From data which seeped into the Polish General Staff, it appeared that the Soviets in 1979 were preparing their units for the invasion of Afghanistan for about two months. The exercises took place in many military training areas located in the Ukraine and in the Asiatic Republics of the USSR.

4. False exercises under cover of which the invasion forces are regrouped and take over convenient border transit positions for operations, and in favorable conditions can even enter the territory of the country which is the target of invasion or intervention.

Such operational activities probably would be conducted under the pretext of one or several typical exercises for a given Theater

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of Military Operations. In the event of an invasion of Romania or any other Warsaw Pact state, the pretext of "SOYUZ" or "SHIELD" exercises could be used, which even in this instance would not signify that such an exercise actually would be prepared and conducted.

Despite the fact that he himself was involved in the planning and command center of the 1968 Pact invasion of Czechoslovakia, the author of this report could not recall whether either the chief organizer of this invasion, the General Staff of the Soviet Armed Forces, or the operational command headed by Soviet Marshal Yakubovsky had any exercise prepared for this specific purpose. In that instance, in order to keep the waiting operational forces busy, the Legnica group of Marshal Yakubovsky prepared ad hoc, day-to-day directives and exercise tasks, the implementation of which was never subsequently controlled. During that period no one, from the highest level down to the middle command level, wanted to become seriously involved with exercises which were basically used to mark time. In those hours in 1968, the center of attention was focused on the other problems: How to conduct operation "DANUBE"²³ most effectively? How to neutralize the small but well-armed and well-equipped Czechoslovak army? Where actually were the Czechoslovak units located? How would they react to the entry of Warsaw Pact forces? How to treat the restless civilian population?

The scenario of false exercises of the Warsaw Pact forces of 1968 was supposed to have been repeated, in a somewhat improved fashion, during the period of the socio-political crisis in Poland in 1980. The improvement consisted chiefly of the fact that the entry of some 15 Warsaw Pact divisions into Poland was simply to be called the "SOYUZ-1980" exercise. The only information regarding this exercise which the General Staff of the Soviet Armed Forces transmitted to the Polish military leadership (on 1 December 1980) was an approximate composition of the invasion forces, the time of readiness to cross the eastern, southern, and western borders of Poland, and the regions of Poland designated for their operations.

The examples given here are useful comparisons, as both the Czechoslovak regime of DUBCEK and the Polish duet of KANIA-JARUZELSKI evinced virtually no indications of decisive resistance. On the other hand, in the event of a Pact invasion of Romania the USSR would have to expect a similar reaction to the one encountered in 1956 in Hungary. Such expectations would tend to make the Soviets more careful, and probably would drive them to do a better job of camouflaging preparations for a move against Romania.

²³ The invasion of Czechoslovakia was conducted under the code name "DANUBE."

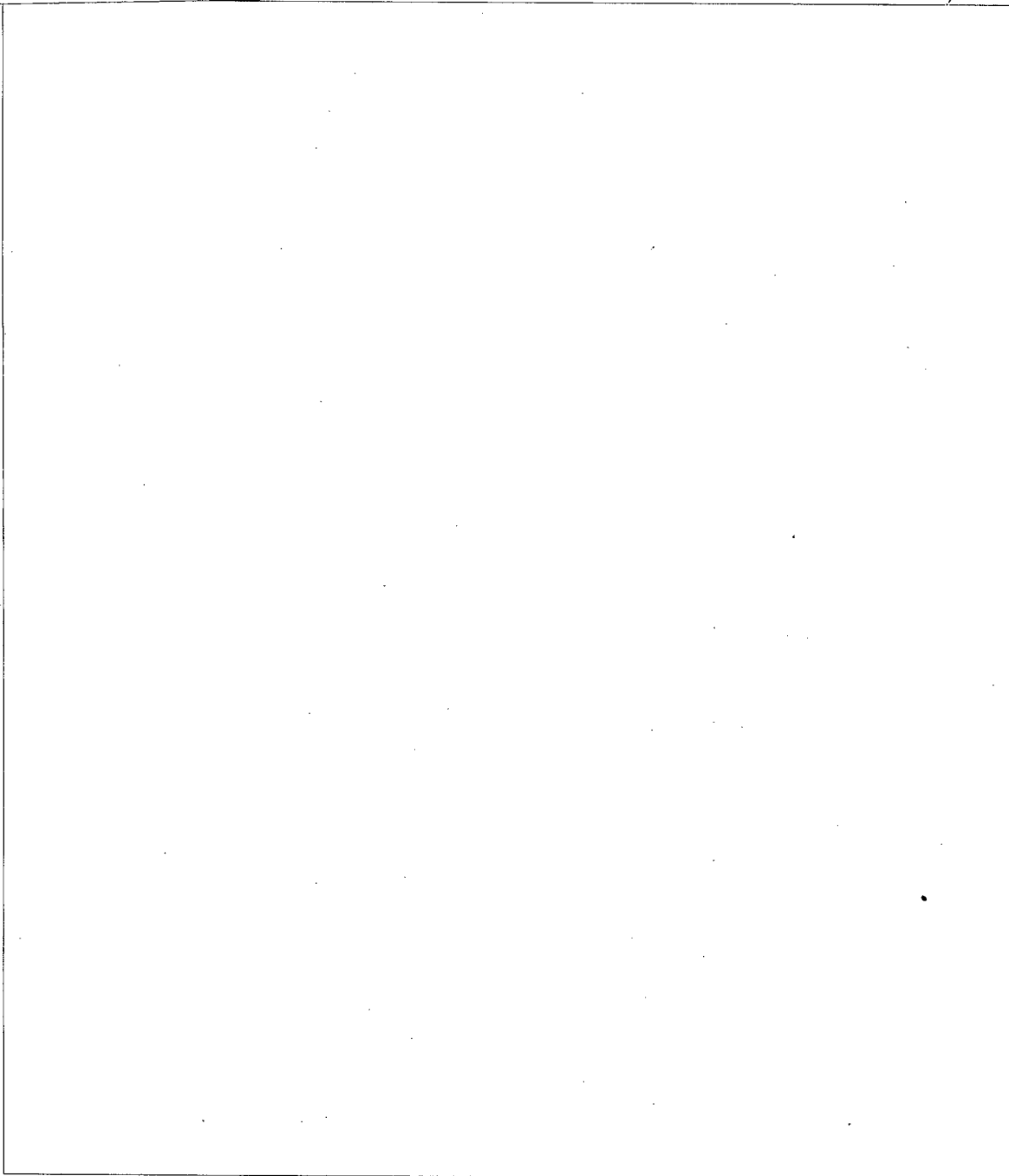
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PAGE 30 OF 12 PAGES

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In the event of an invasion of Iran, the Soviet Union would have to act in an entirely different manner, primarily because they would have to deal not so much with a short-term invasion but rather with a classical local war, in which the element of surprise could well play a key role. They would probably have to work harder at camouflaging invasion preparations, in order to make the idea of an ongoing exercise believable.

5. Exercises of the operational camouflage type.

For the purpose of confusing the picture of a planned invasion, in addition to other forms of operational camouflage and disinformation, exercises of an operational camouflage type also could be conducted. Such exercises could be organized and conducted along similar lines to large command and staff and skeleton-type exercises--using either forces and communications means especially organized and deployed for that purpose or organic resources of the invasion forces themselves. A classic example of the latter solution was exercise "EFIR-68," implemented just before the August 1968 invasion of Czechoslovakia. As mentioned earlier, the chief aim of the "EFIR-68" exercise was to demonstrate a greater concentration of Warsaw Pact forces than that which actually gathered at the borders of Czechoslovakia, and to portray the force as overwhelming, so that the Czechoslovak army would see no point in resistance. This move also was designed to deprive Czechoslovakia's Party and government leadership of any option or will to resist.

6. False exercises, under cover of which combat readiness of certain elements of the Soviet Armed Forces and their eventual allies could be increased for a period of time, during which an invasion could be launched.

Should an invasion be unsuccessful, or as a contingency against other possibilities, combat readiness of selected Soviet forces of air defense, strategic air forces, fleets, and ground forces would be raised, along with forces of other Warsaw Pact states. Prior to the start of the invasion, undertakings connected with it would probably be implemented under the pretext of inspections or combat readiness training. It should not be ruled out that, in such an instance, the commands of armed forces branches, military districts and groupings of Soviet forces outside of the USSR borders could, at the recommendation of the General Staff of the Soviet Armed Forces, prepare some kind of ersatz exercises, to create a pretext for maintaining an increased level of readiness.

The package of false, demonstrative, pretended and real exercises presented here certainly does not exhaust all

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possibilities which could precede a Soviet invasion of, for instance, Romania or Iran. Also, it is unlikely that in all conditions and situations, the entire range of exercises would take place, or that the sequence of exercises would coincide precisely to the one outlined here.

Pragmatically, the Pact's false exercises would be simplified to the maximum. The whole preparation, i.e., the documentary part, could be reduced to several simple, laconic premises, on the basis of which some kind of training tasks for the armed forces matching the real operational activities would be formulated. The exercises probably would not contain the routine dynamics and tension, and exercising forces would have much more time on their hands to execute tasks assigned to them. There would be no umpires assigned to commands, staffs, or units. There also would not be any role-playing groups, or any simulations. There also would be an absence of the classical leadership staff of the exercise.

Key differences also could be noticed in the composition of participating forces. In long-term planning exercises, because of economic constraints and the restricted capacities of military firing ranges, there is a very careful selection of means and forces, counting nearly every tank and every military vehicle. As a result, routine exercises usually involve chiefly commands and staffs of limited combat composition. Long-term planning exercises which involve more than two divisions in their full combat strength are a rarity. In false exercises designed to hide preparations for invasion, one could easily see a large number of units, fully reinforced, with a large percentage of mobilized reservists. These reservists are easily recognized: they are a bit older, and are permitted to have longer hair, or even moustaches.

For normal exercises, units deploy without combat munitions, and medical support elements are simulated. For invasion preparations under cover of a fictional exercise, however, units would be provided with full allowances of munitions and explosives. Additionally, it is likely that large numbers of medical personnel and transportation for wounded also would be mobilized. Also, the combat composition of tactical elements (divisions) would be reinforced with a significant number of helicopters of various types.

From this structure, however, there could be certain types of weapons and military equipment which might be excluded. For instance, in the event of an invasion of Romania, the surface-to-surface and surface-to-air missiles, heavy field artillery, antiaircraft artillery, bridge construction engineering units, decontamination units, etc., would probably not be required, and would not accompany the invasion force.

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In operational camouflage and demonstrative exercises, one would be able to monitor increased radio traffic and, within this, instances of open-text messages. In false exercises, however, which hide actual operational activity, extremely tight restrictions on the use of technical means of communications, especially radio, would be in effect.

B. WHAT SHOULD A WESTERN OBSERVER KNOW, LOOK FOR, AND BEWARE OF, BOTH ON THE GROUND AND IN TECHNICAL COLLECTION OF SIGNALS AND PHOTOGRAPHY?

It would seem that a Western observer should, above all, realize that Warsaw Pact exercises constitute the highest form of preparation for war tasks, and as such could be rich sources of relatively reliable data concerning various areas and aspects of their preparation. In the realm of exercises, a Western observer can seek answers to nearly all questions which puzzle him, starting with changes in Soviet war doctrine, the most concrete data concerning the overall concept of armed forces organization and structure, their armaments and equipment, combat readiness and mobilization systems, command, communications, and combat as well as the technical material support up to the most concrete elements of wartime operational plans. Included in exercise data also should be a wealth of information on the dispersal of key installations of strategic defense significance, such as hardened underground command posts, etc.

Among all joint Warsaw Pact exercises, those code-named "ZAPAD" and "SOYUZ" can potentially provide the most authoritative and complete portrait of Soviet views on ways and means of the conduct of war in Europe. Taking into consideration past experiences, a Western observer should not delude himself that such exercises will ever be conducted in conformance with actual Pact operational plans. He should, however, not simply dismiss the scenarios of such exercises as fictional training, since they do reflect these plans rather faithfully, albeit in distorted realities of time and space.

Air and anti-air operational concepts, continually being improved by the Soviet side, appear in most exercises to closely approximate actual plans, as do the concepts of strategic deployment of the armed forces in the Theaters of Military Operations, their introduction into battle, and the concept of deployment of offensive operations with the use of operational maneuver groups.

Next to the key doctrinal premises, in the exercises "ZAPAD" and "SOYUZ" a Western observer should seek data concerning the functioning of the actual strategic command system of the Warsaw Pact armed forces. The decisions of the Warsaw Pact states,

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undertaken in 1979/80, concerning the wartime appointment of a single (Soviet) Command and (also Soviet) Commanders-in-Chief of the Combined Armed Forces in the Theaters of Military Operations, left little doubt that the Soviet leadership will use chiefly "SOYUZ-" and "ZAPAD-type" exercises to work out detailed and precise prototypes which would be advantageous for them. Among the most important issues which remained unanswered in the 1979/80 written agreements, and which lent themselves to a variety of interpretations, was the role of the national organs of state authority of the NSWP states in the decisions on war and peace, and the possible participation of their states and armed forces in a war against the countries of NATO.

Going further, these exercises could certainly provide answers to such questions as: At what moment will the Soviet command take direct control over the national armed forces of the Warsaw Pact, and how will the transformation from the peacetime to wartime state of readiness take place? Does the management system of increasing the higher states of combat readiness of the Combined Armed Forces, established for that purpose under the cryptonym "MONUMENT," allow for any margin of decision for the national organs of authority and national commands?

"ZAPAD" and "SOYUZ" exercises also could help a Western observer in locating the actual underground command posts of the CAF High Commands in the TMU, planned to be activated in wartime, and perhaps even the underground headquarters of the Supreme High Command. The first stage of the construction of these super-secret installations, implemented under the cryptonym "ALBATROS," was finished in the early 1980s, and it appeared from the statements of the Soviet military leadership (KULIKOV, GRIBKOV) that these sites will be partly manned by the personnel who are there on alert duty in peacetime. There exists, therefore, a considerable probability that in certain phases of "ZAPAD," and especially "SOYUZ" exercises, these installations could be reinforced with additional personnel and included in the command process as a matter of testing.

Tracing the "ALBATROS" targets, a Western observer should consider that their ultimate inclusion into the command process in peacetime can occur only under conditions of maximum security. Personnel entering these installations will certainly be carefully selected, and probably will be exclusively Soviet. The total number of these individuals in the command positions in the Theaters of Military Operations will certainly not exceed a dozen. In civilian clothing, they could be moved by air to the nearest airfields (in the Polish People's Republic, most likely to the Soviet airbase at BRZEG) and moved thereafter by car or minibus to their place of work. A similar procedure could be used for visits to these installations by exercise management personnel.

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There exists a possibility that, during monitoring of communications traffic during "ZAPAD," or especially "SOYUZ," exercises, Western observers could identify new communications centers, and possibly high-level command posts appropriate to the level of a Theater of Military Operations connected to these centers. From the viewpoint of the author of this study, these could well be the new command, control and communication systems of the headquarters of the TMO, established in 1979/80, though certainly deployed in exercises in field conditions which should not be identified with "ALBATROS" installations. If there were any means of communication used in the regions of "ALBATROS" installations, they would most certainly be exclusively Soviet high-frequency cable communications, or a more modern system.

Among other important problems which could be the subject of research in the exercises discussed, (especially in "ZAPAD" exercises), would most certainly be the broadly defined "construction" (BUDOWNICTWO) of the Soviet and Warsaw Pact armed forces. In this regard, attention should be focused as much on organizational-structural aspects as on arms and equipment. In the past, the Soviets used "ZAPAD" exercises to signal certain important structural changes or, as in 1981, to present their newest development in the armed forces structure, organization of certain types of operational elements, armament and technical equipment. It would appear likely that this trend could well be continued in the future. Tracing such issues, a Western observer should be especially sensitive to an eventual structural merger, first in the Soviet Armed Forces, then possibly also in the remaining Pact armies, of air forces and troops of air defense, and subordination of these to the combined-arms commanders at front level.

Such integration processes, signaled by the Soviets in the early 1980s, were to lead to the elimination of the duplication of many aspects present in branches of the armed forces. In reality, observers should look at these changes--without discounting these motivations--as a trend toward a shift of the main effort of the combined armed forces to the external front, in order to increase their offensive capabilities, especially in the air space.

With equal diligence, a Western observer should follow the development of the organic air forces of combined-arms armies. These armies, initially equipped with helicopters and projected to be provided also with attack aircraft, (including V/STOL), and the experimental corps organizational structure foreseen for use in the Western Theater of Military Operations as an operational maneuver group of the front, were demonstrated for the first time by the Soviets during "ZAPAD-81."

It is difficult to predict in which direction the "ZAPAD"

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and "SOYUZ" exercises will develop. Many of the senior Soviet military leaders involved in these exercises in the 1970s and early 1980s have passed from the scene. There exists a certain probability that, despite past and future personnel shifts in the Soviet military leadership, the organizational-methodological premises of "ZAPAD" and "SOYUZ" exercises could change in their details, while the generalities remain the same.

In other areas, somewhat deeper changes are possible, not only in the personnel sphere but in the organizational structure. In conjunction with the establishment of the wartime Supreme Command and the High Command of Forces in the Theaters of Military Operations, it seems likely that one of these two most important Warsaw Pact exercises (probably "ZAPAD") could be devoted to the upgrading of the strategic operational command on the scale of the European Theater of War. The other exercise (probably "SOYUZ") would likely be limited to the level of the Theater of Military Operations.

Personnel and structural changes will most likely have no great influence upon the character, operational premises or frequency of the conduct of such exercises as:

- Front-level skeletal exercises involving Soviet as well as other Warsaw Pact national armies, with the participation of detached Soviet forces.
- Pact maneuvers of the "TARCZA" (SHIELD) type.
- Joint tactical exercises of the "DRUZBA" (FRIENDSHIP) type, with the participation of troops in the field.

These exercises all should be treated by Western observers as an excellent and sufficiently representative basis for keeping track of changes in the Soviet military doctrine for ground forces from front level down to regiment and independent battalion, as well as of other branches of armed forces exercising with these troops. Observers of these exercises should be able to conclude that the concepts and problem-solving processes observed during these exercises are either already generally accepted within the Warsaw Pact or are the forerunners (by a number of years) of what will later appear in Soviet field manuals or other official publications and regulations.

In these exercises, Western observers also should not count on identifying activities which conform to actual operational war plans; however, observers should know that, while exercises of the "TARCZA" and "DRUZBA" types are useless in this respect, Soviet and NSWP frontal type exercises could reveal relatively extensive elements of these plans, especially if they are

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analyzed carefully over a period of five to ten years. Observers should make their analysis in the context of, and in conjunction with, other exercises such as "TRANZYT" (Transit), "VOLNA" (Wave) and other operational undertakings such as operational preparations of the territories of the Warsaw pact states as a part of the Theater of Military Operations.

In keeping track of the skeletal Soviet front-level exercises conducted in the areas of the Western military districts of the USSR, as well as front-level exercises of the Polish, Czechoslovak and Bulgarian armies, Western observers should focus especially upon the application of the wartime command systems of these fronts and of the armies which constitute them. All data in this sphere of activity will be important for a number of reasons. In the first place, these activities probably will be the very first concrete manifestation of either exercise-type or actual operational activities of these elements which lend themselves to interception from the outside. In the second place, these activities could demonstrate to Western observers the routine, but actual mechanism of the deployment of the wartime command organs based on the peacetime structures of these essential levels. In the third place, certain of these data could well reveal the field sites of partly hardened command posts foreseen for use in the event of crisis or in the initial phase of an actual war.

In order to keep track of the deployment of the wartime command systems of the fronts and armies, all available means and methods at the disposal of Western observers should be employed. Using these means and methods, observers should be aware, however, that the technical interception of communications traffic as well as reconnaissance satellite photography might not be helpful or sufficient here, and these methods should be supplemented with other technical means. It would seem that one useful approach could be the posting of direct human observers near peacetime locations of these commands and staffs and also in the vicinity of communications and support units. In the past, the military leadership of the Warsaw Pact was convinced that the NATO countries had at their disposal such a system of agents' observations and monitoring of the activities of the most important elements of the Warsaw Pact armed forces. Accordingly, leadership took appropriate steps to camouflage every operational or exercise activity to an appropriate degree. Experience revealed, however, that it is impossible to camouflage everything from human eyes. In view of this, an agent placed near a target (especially if he had at his disposal his own apartment) would have no particular difficulties in estimating the situation and monitoring its development.

In order for Western observers to read from outside the

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operational contents of skeletal front exercises played over a large area, the key elements will most likely be the technical interception of signals and photography.

In the technical interception of signals, the Western observer should know that, in conformance with the principles of secret command, Pact radio communications would be used only as the last resort, most frequently by lower echelons and then only in the dynamic phases of an exercise. An intensive exchange of radio messages at higher echelons (front, armies, branches of armed forces) could frequently indicate normal technical testing of network capacity and radio directions without transmitting any operational contents. It could also indicate that this traffic is conducted by communication facilities functioning within the framework of operational camouflage of an actual exercise. In attempting to analyze which facilities are working with the actual command relations and the management of an exercise and which are merely simulating such activity, the observer should, inter alia, consider the fact that older-generation equipment is generally used for camouflage purposes. Thus, the observer should consider any data transmitted in clear text as very suspicious.

Potentially, the most important and valid data can be obtained by Western observers from intercepted discussions and correspondence conducted in classified, (or at times even open) stationary communication systems of the defense ministries of the Warsaw Pact states, and on the field telephone systems of the Soviet government's high frequency and military ("Ti") communication systems. Stationary telegraphic communication systems of the defense ministries of the Warsaw Pact states are used routinely for the management of the processes of increasing states of combat readiness to higher levels, and at times (in the motion phase of exercises) for the transmission of coded operational directives of the Supreme High Command of the Combined Armed Forces and the High Commands in the Theaters of Military Operations.

The stationary telephone communications nets (both classified and open), however, were normally used for the management of the exercise deployment of the armed forces in the Theater of Military Operations, especially for the management and control of the movements of troops, management of exercise activities of the forces of territorial defense and civil defense, as well as exercise replacement of war losses. These means of communication could also be used by the field umpires, and at times, by the role-playing groups.

In monitoring the air waves, Western collectors should seek out new-generation equipment as a tool to understand the exercising commands and staffs which could open new possibilities of an

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ultimate decoding of the secrets of the correspondence. One such modern device on which science and research (as well as construction-development organizations of nearly all Warsaw Pact countries) worked was supposed to have been the Automated Field System for Commanding the Ground Forces of the Warsaw Pact--so-called PASUV.²⁴ This system, which was to have the capability of transmitting pictures of texts of documents and graphics over long distances, was introduced experimentally on the tactical level in the early 1980s. In the second half of the 1980s, it was also to be introduced at the level of combined-arms armies. In the Soviet Army, especially in the groups of forces and in the western military districts, where the equipment for the forces and the military technology normally was at least five years ahead of the NSWP states, the Automated Command Field System (PASUV) should have been visible much earlier, and could appear also at front level.

In routine front-level skeletal exercises there will be few targets for photography, save for staffs, their communications units and a few combat units (at times, only sub-units playing the role of so-called "designated troops"). "Hunting" for the exercising commands and staffs, Western collectors should take into consideration that each command element, from the tactical element (division) to a front, deploys three mobile command posts (command post, alternate command post, and rear command post). These posts are chiefly deployed in the rear, in large forest areas and (if at all possible) in military training areas. Military areas are preferred, especially by the Soviets. In order to avoid the exposure of the locations of their sites, the command posts are deployed mainly under the cover of night, or during times of limited visibility. For these reasons, and also for the maintenance of an appropriate contact with the "fighting troops," the sites for deployment of particular command posts were systematically changed. In the dynamic phases of exercises, a division could shift its command posts twice during a 24-hour period; an army, once in a 24-hour period, and a front once every 48 hours. It was also recommended that such shifts take place at night. Should the hours of darkness be too short for shifting of any command post (and this usually was the case during the summer), the relocation could commence during the day; however, it had to be completed before dawn. In sum, for the purpose of tracking and photographing Pact mobile field command posts, Western collectors should apply a variety of the arts of photography, including means which would permit night photography or photography under limited visibility conditions.

In the past, during front-level skeletal exercises, especially

²⁴ PASUV is the Soviet abbreviation for POLUVAYA AVTOMATICHESKAYA SISTEMA UPRAVLYANIYA VOYSKAMI.

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those conducted by NSWP armies, a Western observer could encounter a relatively large number of special vehicles (staff buses, command vehicles, and others) moving in columns along the roads or deployed in the field, which simplified location and identification of the command systems of exercising elements. This state of affairs was, however, criticized rather widely in Pact military circles. It was considered that a large number of special staff vehicles was a glaring luxury which could not pass the test in wartime, since it would make a quick and secret maneuver more difficult and would not assure appropriate defense, especially against weapons of mass destruction. Additionally, such a large number of vehicles exposed the sites of the deployment of command posts, etc. As a more realistic solution to this problem, a restriction on the equipment of the command post was considered, in order to limit the number of multi-functional vehicles serving the automated command system ("PASUV") as well as the use of simple means of transportation of personnel used by the military. It was also pointed out that permanent civilian structures, such as schools, vacation facilities, etc. could be used for command posts, thus providing better camouflage, cover and defense from the weapons of mass destruction.

Until the end of 1985, the development plans of the armed forces of the Warsaw Pact did not foresee any concrete changes in the required structure of command posts, their equipment, and methods of deployment. Nonetheless, the envisioned resolutions seemed to be rather close to implementation, and deserve close scrutiny by Western observers, since they could radically change the picture of what has been observed in recent years in tracing the command system of Warsaw Pact armies in the field.

In addition to the exercising staffs, facilities which warrant photo coverage would seem to be the so-called "designated troops," insignificant in appearance, but capable of providing considerable data about the dynamics of front-level skeletal exercises. Should the Western observer be able to identify their traces and confirm their activity in time and space, he could recreate the key elements of operations being played.

Regarding ground forces, the most spectacular photo targets would seem to be the staffs and troops taking part in the "SH'CHIT" (Shield) and "DRUZHBА" (Friendship) exercises. Interpreting photography of these exercises, conducted chiefly in military training areas, the Western observer should focus his attention on seeking new armaments systems and technical equipment of the troops at the tactical level. As mentioned earlier, these types of exercises were to a large extent set-piece demonstrations, and each national army attempted to present everything which was the newest and the best. Equally valuable could be such photography which would make possible even fragmentary verification of the

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organizational structures of the units and their TO&E armaments and equipment. This could be especially valuable because, for "SH'CHIT" and "DRUZHBA" exercises, attempts were made to deploy participating units with their full TO&E complements.

Despite the Soviet changes in the structural makeup of the Air Defense troops, it would seem that the heretofore practiced way of conducting exercises "GRANIT" (Granite) and the training in cooperation of these forces will be retained in the future. These undertakings should be followed and documented in detail by Western observers, since they are conducted strictly according to the actual plans of the air defense of Warsaw Pact states. The only fictional aspects of the air defense exercises are the simulated NATO air operations. Models of NATO air attacks and the methods of their execution are, however, programmed on the basis of the latest intelligence data which reflect the state of knowledge of the Warsaw Pact about the potential and methods of operational means of an air attack by NATO.

With the assistance of the technical interception of signals and photography, Western observers can systematically update data about the combat grouping of the unified air defense system of the Warsaw Pact states (the system of the stationary command posts, the primary, alternate, and simulated missile firing sites, the locations of radio-electronic troops, the primary and alternate airfields, as well as highway airfield segments of the air defense air forces, etc.)

In the technical interception of communications signals, attention should be focused on the traffic of the automated command system of the air defense--ALMAZ (national levels), VOZDUKH 3M or VOZDUKH 1P--supplemented with the CYBER and DUNAJEC equipment (for corps level) and VECTOR (for tactical levels). While intercepting electronic signals, the Western observer should know that, during exercises and routine operations in peacetime, certain wartime frequencies which are sensitive to interference by certain types of equipment (probably missile guidance control) are never used. Similarly, it is forbidden to activate the hidden radar system deployed in conjunction with P-40, which also is reserved for wartime.

In peacetime, these P-40 radar stations on tank carriages are kept hidden in underground shelters. "GRANIT" exercises or other training requirements could create unique situations in which either the whole system or some of its components could be brought out of the shelter for testing of the maneuver of rapid deployment. Since it does not seem probable that this hidden radar system would ever be activated in peacetime, the only trace of its existence would be the physical appearance of P-40 radar stations (or a follow-on system) at ground-level sites, which could be

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chiefly ascertained by photographic documentation. While searching for a hidden radar field station, the Western observer should take into consideration that these systems are deployed in the vicinity of missile sites.

From the remaining larger exercises, the training of general staffs of allied armies deserves particular attention from the Western observer, as do the "TRANZYT" exercises of technical rear elements of the Combined Armed Forces. The common characteristic of both undertakings is that they take place in most cases with few alterations in the actual data concerning defense resolutions of the Warsaw Pact.

In the training of the Pact general staffs, observers can follow especially the actual activities concerning the system of converting the armed forces and the economy of Warsaw Pact states from peacetime to wartime, and also acquire extremely valuable data concerning the supply and support of the technical-material and human needs by the particular states of the Warsaw Pact's operational forces. From data of a given exercise, one could recreate with a large degree of accuracy the actual levels of wartime reserves of particular types of munitions, rockets, bombs, fuels and oils, spare parts, medical supplies, food rations, etc. From "TRANZYT" exercises, the Western observer has a potential opportunity to identify the key infrastructure installations in the Theater of the Military Operations which are needed for the transit of Soviet forces through the territory of the NSWP states, such as:

- Railway and road transit lines of strategic significance.
- Strategic transloading sites at the Soviet border.
- Railway reserves, road bridges, and waterways crossings.
- The system of bases and warehouses for technical-material support of the Soviet forces.

The rear exercises ("TRANZYT") seem to be relatively easier to identify and to follow (especially by direct observation or photography), because of the participation of relatively large and specific road-engineering, railway and bridge, fuel pipeline, ammunition transport, and other logistics units. Primary attention of an observer who follows such exercises should be concentrated on the border areas between the USSR and other Warsaw Pact states, in the areas of the tributaries of large rivers and also along the main east-west roads and railways.

Training of the general staffs, in contrast to exercises of the "TRANZYT" type, will most likely be difficult to pick up and to follow, chiefly because this training probably will be conducted in

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closed conditions and in permanent facilities. Also, the exercising elements will as a rule employ stationary, classified communications systems. In some training of this type, operational groups of commands and staffs of fronts, air defense forces and the navy could also take part, and could be involved in the activation of additional field command systems for these troops. Such activities would be more easily identified and penetrated by a Western observer. From past experience, however, it appears that in the realm of field communications, the Western observer cannot count on much useful data. It would seem that in order to recreate the contents of training, an insight into the messages transmitted by the stationary communications system of the STAVKA will be necessary, at the least.

C. WHERE SHOULD HUMAN AND INTELLIGENCE EFFORTS BE FOCUSED BEFORE, DURING AND AFTER AN EXERCISE, TO LEARN MORE ABOUT ITS PURPOSE, SIZE, PARTICIPANTS AND RESULTS?

The aims of large Warsaw Pact exercises, their daily schedule, scope, the composition of those exercising, and the results were known in all their detail only by a very limited number of people at the management level and by the compact authors' teams. Such data in generalized form were provided either in toto or in part, on a need-to-know basis, to the most important participants of exercises (routinely from 150 to 250 persons) during the summaries (critiques) of the exercises. The critiques of the majority of exercises were issued in printed form and disseminated to authorized functional personnel for official use. For example, in an NSWP army, if it was the organizer of an exercise, a rather large number of copies was traditionally distributed. (In the Polish Peoples' Army, usually up to 100-150 and more.) These copies were distributed to the most important institutions of the Ministry of National Defense, commands of branches of armed forces, military districts, chiefs of troops and services, and the military academies. Participants from other Warsaw Pact armies usually received only one copy. The Soviets routinely distributed this copy with a restriction that it was destined for the exclusive use of the Minister of National Defense. The minister, at least in the Polish case, rarely retained this document himself, transmitting it usually to the General Staff. After passage of a certain period of time, the copy of the Soviet critique of exercises could be found either in one of the operational elements of the General Staff or in a library, with a restriction on who may check it out.

The aims of exercises, their detailed scenarios, their participants, as well as their results, also could be seen in the documentation from these exercises. During the time of the preparation of an exercise or during its conduct, there were usually more than ten copies of full documentation, and hundreds of copies of selected parts. Tens of "conceptual" personnel take part

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in the preparation of exercises and have access to the documentation connected with it. Further, at least as many military and civilian support personnel were involved (typists, draftsmen, printers, xerox operators, classified registry personnel, etc.).

In sum, exercise data were known to a relatively large number of people at various levels of the military hierarchy, from the very highest to the very lowest. Still more people had access to exercise documents, with a significant number having access even before exercises began. Obtaining relevant intelligence data from these sources might not be simple and easy, but is not impossible. If, for whatever reason, one would have to rely on so-called national means, then the only way to accomplish the aim of the collection of data would seem to be an increase in the upgrading of the effectiveness and usefulness of the monitoring of all military activities of Warsaw Pact states, on the basis of which the training undertakings could be more visible. A key element for an ultimate upgrading of the usefulness and effectiveness of the monitoring process would seem to be penetration of the stationary system of classified communications of the STAVKA, or at the least, the most important communications links between the General Staff of the Soviet Armed Forces and the general staffs of the NSWP armies. Equally important would seem to be the development of a reliable capability for rapid identification of the wartime command systems at the levels of the Theaters of Military Operations, fronts, armies, fleets, and their tactical elements, activated for operational and exercise needs, as well as the possibility of interception and reading of messages involved in this traffic. The main effort should be directed toward the classified Soviet Government high frequency, and the military "Ti" communications systems, as well as the automated command and control systems of the air defense troops (ALMAZ, VOZDUKH 3M, and VECTOR), and ground forces automated field command systems (PASUV), and also those of the fleet (PASUF).

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ANNEX 1

GENERAL STRUCTURE OF WARSAW PACT OPERATIONAL TRAINING

All Warsaw Pact states accepted the Soviet training structure, in which exercises constituted one of the most important forms of operational training. In this structure, the operational training was divided into:

- Training of generals, admirals and officers.
- Training of command organs and operational elements (echelons of army size).
- 1. Training of Generals, Admirals and Officers.

The main types of training for generals, admirals and officers were:

- Operational tactical training.
- Technical military training.
- ~~Specialist (technical) training.~~
- Methodology training.

The most important forms of the above types of training were:

- Independent work.
- Command activities.
- Operational courses for commanders.
- Operational reconnaissance and field trips.
- Conferences and scientific-military councils.

In the independent work the following methods are usually practiced:

- Independent studies of the theory of art of war.
- Completion of independent tasks (assignments).
- Exercises for the improvement of procedures.

In the framework of command activities and operational courses

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for commanders, the following methods were employed:

- Lectures, reports and seminars.
- Practical activities using armaments and equipment.
- Exercises including assignment to functional positions.
- Demonstrations of activities.

2. Training of the command organs and operational elements (echelons of army size). The main forms of this type of training were:

- Staff exercises.
- War games.
- Command and staff (or staff) exercises.
- Operational exercises involving the use of troops and maneuvers.
- Operational-mobilization and specialist-technical exercises.
- Operational field trips.

All of the following elements of the above undertakings were classified according to:

- The scale.
- Organization and the method of conduct.
- Aims.

According to the scale the exercises were divided into:

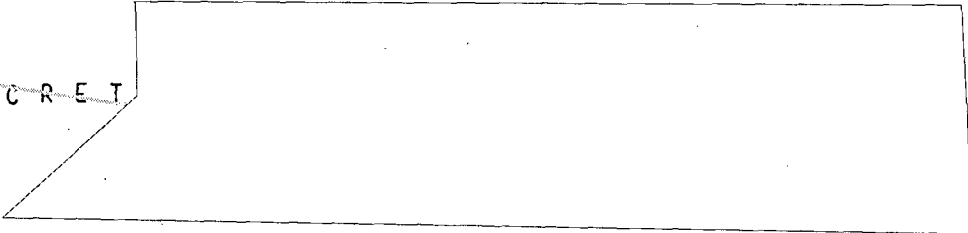
- Strategic.
- Operational-strategic.
- Operational-tactical.

According to the organization and the methods of conduct, the exercises were divided into:

- Independent or joint (coalition).

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- One-sided or two-sided.
- With command organs and means of communications.
- Single or multiple echelons.
- With participation of troops or with designated troops.
- Map or field exercises.

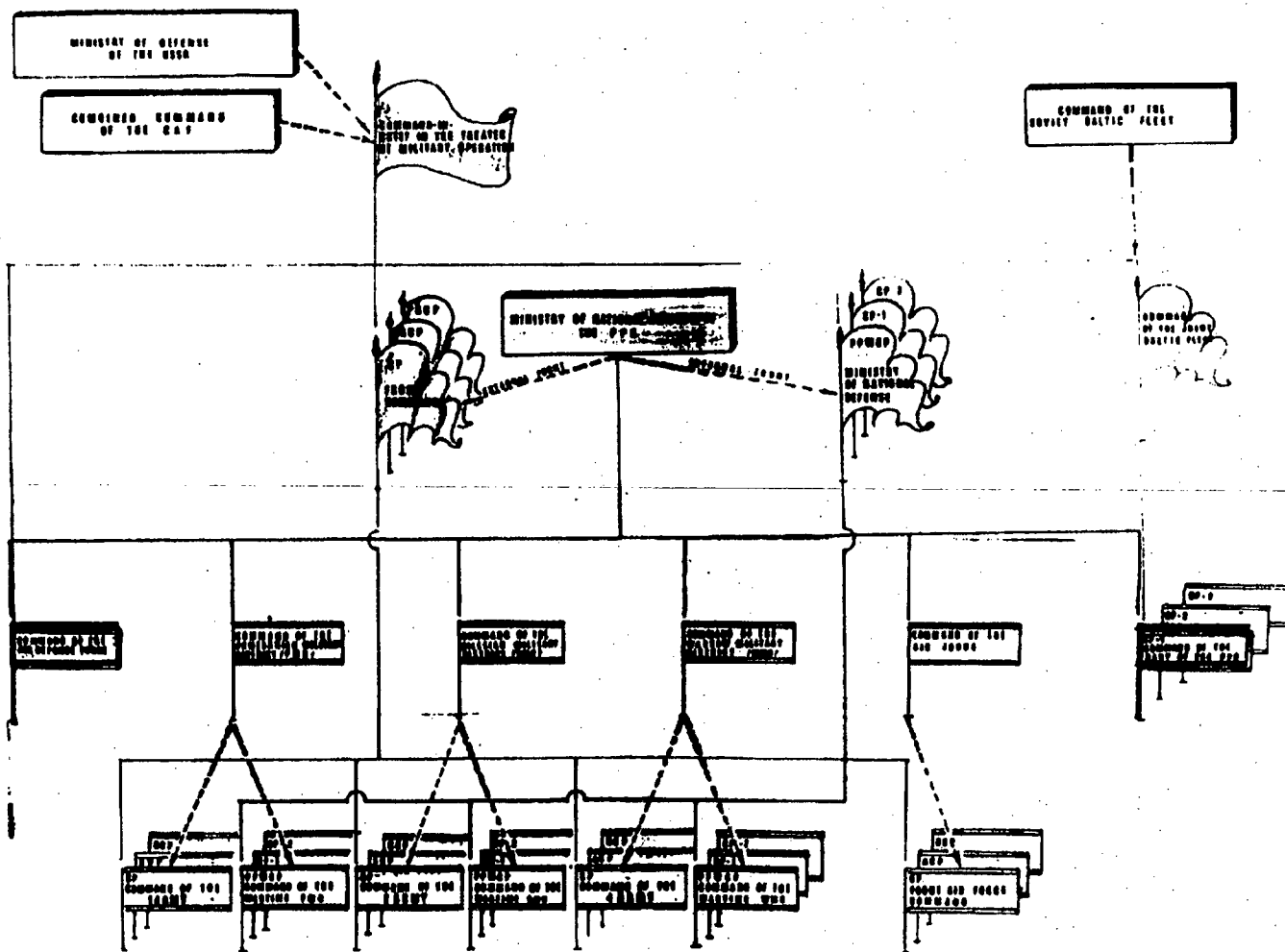
According to the aims, the exercises were divided into:

- Improvement of command organs and teamwork.
- Demonstration.
- Experimental-research.
- Inspection and control.

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SIMPLIFIED DIAGRAM OF THE CONVERSION OF THE POLISH COMMAND SYSTEM FROM PEACE TO WARTIME FOOTING



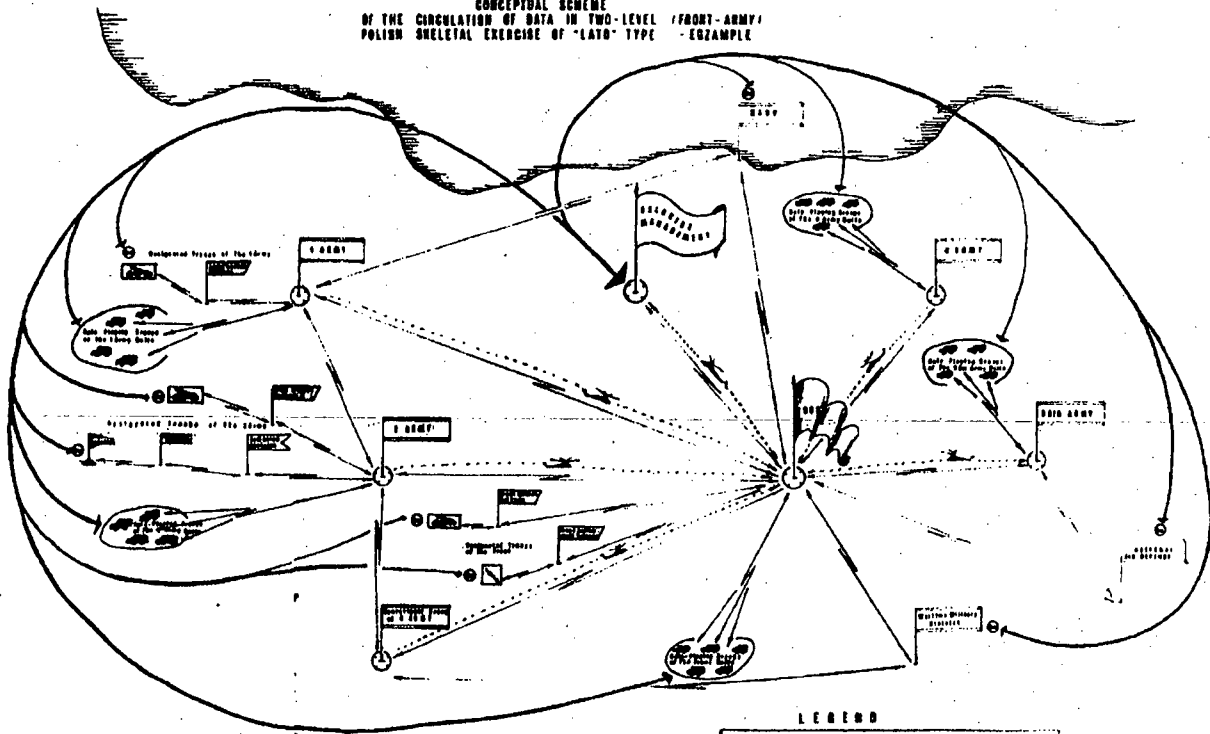
LEGEND

—	PEACETIME STRUCTURES OF COMMAND AND MANAGEMENT:	CP	COMMAND POST
- - -	WARTIME COMMAND ECHELONS	ACP	ALTERNATE COMMAND POST
—	EXTERNAL FRONT	CCP	USSR COMMAND POST
- - -	INTERNAL FRONT	CP-1 / 2	COMMAND POST G-1 / G-2
		CPWOP	COMMAND POST AT THE PRESENT PLACE OF WORK

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ANNEX 3

**CONCEPTUAL SCHEME
OF THE CIRCULATION OF DATA IN TWO-LEVEL (FRONT-ARMY/
POLISH SKELETAL EXERCISE OF "LATO" TYPE - EXAMPLE**



LEGEND

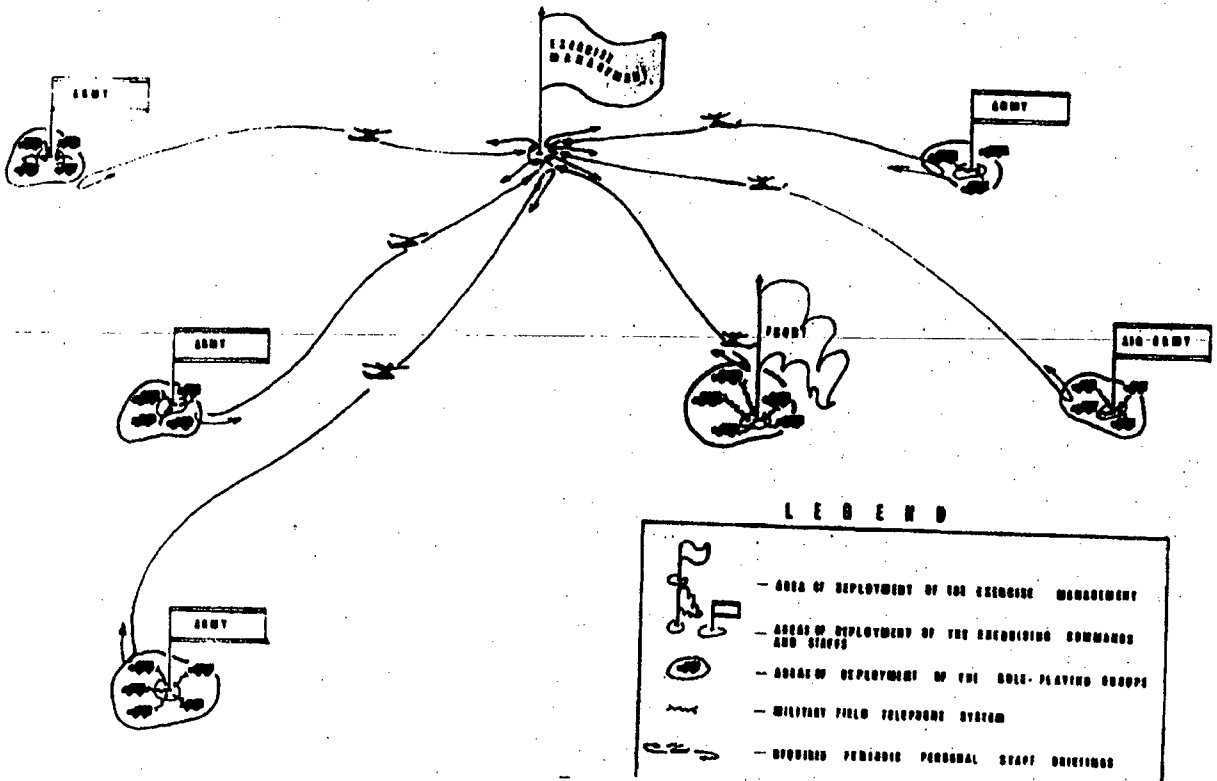
- COMMAND MANAGEMENT
- ORGANIZATION COMMANDS AND STAFFS
- INFORMATION DISTRIBUTION GROUPS
- SELF-PLAYING GROUPS
- GROUPS
- COMMUNICATIVE DATA VIA:**
- COMMUNICATIVE DATA VIA: TELETYPE, TELEPHONE, RADIO, TELEVISION, TELEVISION, TELEVISION
- FIELD EXAMPLES COMMUNICATIONS SYSTEMS
- SPECIAL COMMUNICATIONS MEANS "HOT" COMMUNICATIONS CASES
- TELEPHONE COMMUNICATIONS SYSTEMS
- SPECIAL FIELD BATTERY DATA

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ANNEX 4

**SIMPLIFIED DIAGRAM
OF THE DEPLOYMENT OF ROLE-PLAYING GROUPS IN THE FRONTAL SKELETAL
EXERCISES, ACCORDING TO THE TRADITIONAL SOVIET METHOD**

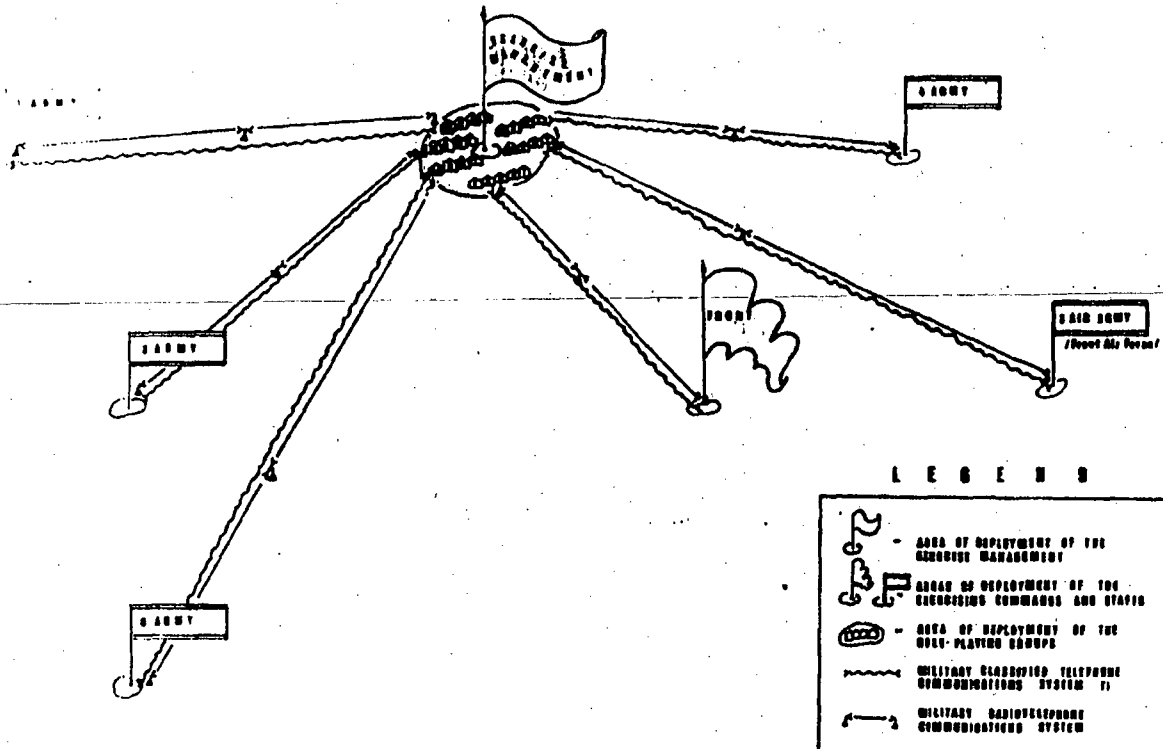


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ANNEX 5

SIMPLIFIED DIAGRAM
OF THE DEPLOYMENT OF ROLE-PLAYING GROUPS IN THE FRONTAL SKELETAL
EXERCISES, ACCORDING TO THE NEW POLISH METHOD



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