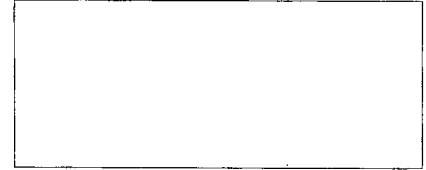




10185

~~Top Secret~~



APPROVED FOR
RELEASE -
HISTORICAL
COLLECTION
DIVISION HR70-14
DATE: 07-18-2012

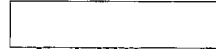
Intelligence Report

*Organizational Development of the
Soviet Ground Forces, 1957-1975*



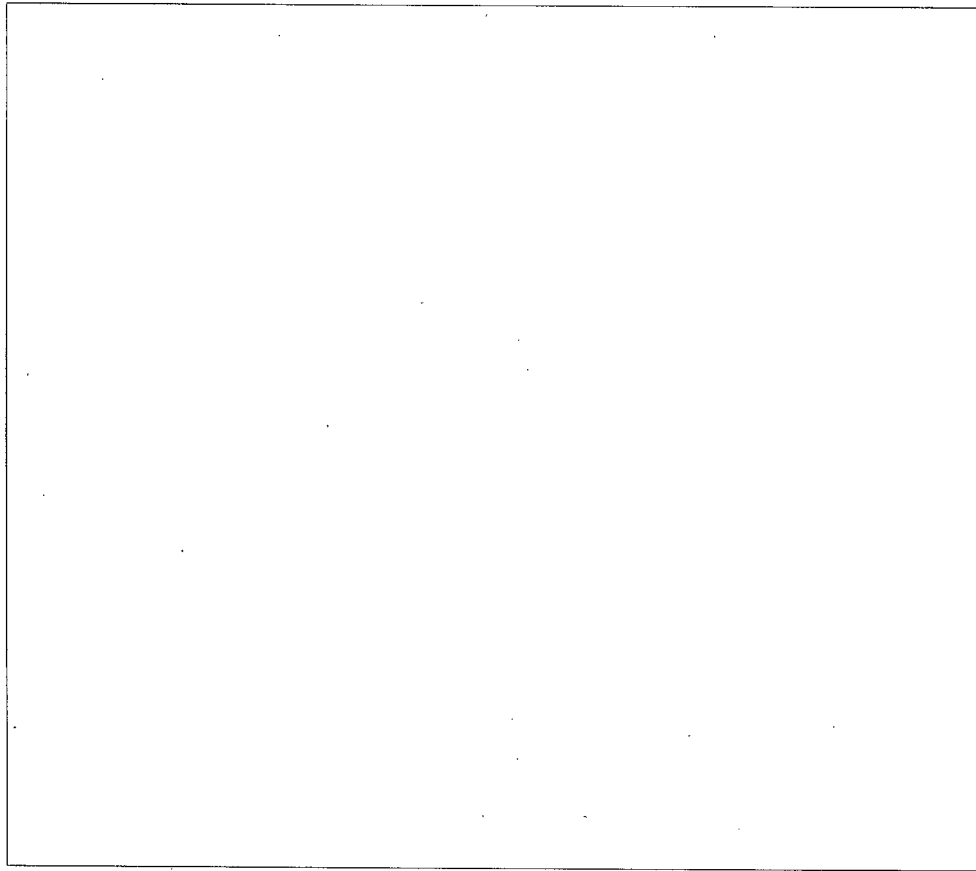
~~Top Secret~~

SR 76-10104



April 1976

Copy No 199





~~Top Secret~~

Organizational Development of the Soviet Ground Forces, 1957-1975

Key Findings

Soviet ground force organizational development is characterized by centralized control, a desire to maintain organizational stability, and continuous assessment of—and response to—changes in the forces of potential adversaries.

In 1956 and 1957 the Soviet General Staff developed ground force organizations for the nuclear battlefield. But because Khrushchev questioned the utility of ground forces in a general nuclear war, budget allocations were reduced. In 1960-61 these organizations were subjected to intense criticism, which centered on the utility of the tank in a nuclear environment. The framework of the organizations remained virtually unchanged, however, until about 1966, when it began to be expanded. This was primarily because of a modification in Soviet doctrine that accepted the possibility a NATO-Warsaw Pact war might begin with a nonnuclear phase of indefinite duration.

The current organizational structure

- better accommodates the requirements of a possible phase of conventional war
- reflects continued confidence in the utility of tank formations in either conventional or nuclear war
- has improved the capability of motorized rifle units to operate in either a nuclear or nonnuclear environment
- positions the weight of conventional artillery forward in the divisions
- may be in transition as regards front and army artillery.

Efforts are being made to improve command and control facilities. Parallel efforts are leading to improvements in anti-aircraft defense, cross-country mobility, chemical defense capabilities, and field maintenance support.

Because Soviet ground force organizations are being developed to operate in either nuclear or nonnuclear conditions, a further modification in doctrine accepting the possibility of limiting nuclear weapons use to the battlefield would probably have little impact on existing organizations.

For the future we can expect

- continued efforts to improve command and control
- a possible effort to eliminate a command echelon, such as the battalion
- continued introduction of new equipment at a rate determined by assessment of potential enemies and resource limitations and influenced by institutional biases. Because the force is so large, it is unlikely to be reequipped completely with any given item of major equipment. Therefore, it will continue to be misleading to calculate the size and effectiveness of Soviet ground forces on the assumption that ultimately all units of a certain type will be identically equipped.

~~Top Secret~~

SR 76-10104
Apr 76

~~Top Secret~~

CENTRAL INTELLIGENCE AGENCY
Directorate of Intelligence
April 1976

INTELLIGENCE REPORT

Organizational Development of the
Soviet Ground Forces, 1957-1975

Introduction

The art of organizing effective military units has been characterized by an authoritative Soviet military writer, Army General S. M. Shtemenko, as "in the last analysis, affecting the might and defense capability of the state." Continuous efforts are made in the Soviet armed forces to find the optimum combinations of personnel and equipment to accomplish a given military mission.

In the Soviet ground forces, basic units--the squad and the platoon--are formed to exploit weapons such as small arms and tanks, or items of equipment such as the bulldozer. As units are combined to achieve increased combat or support capabilities, complementary arms and equipment are added to supplement the characteristics of basic weapons and equipment. Considerations of command and control are balanced against various combinations of men, weapons, and equipment to establish tables of organization and equipment for each unit. At the national level, force planners select the numbers and types of units needed to accomplish a military mission in a particular theater of operations.

The process of developing suitable unit organizations involves a continuous interaction among the

Comments and queries regarding this publication are welcome.
They may be directed to

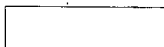
Office of Strategic Research

SR 76-10104
Apr 76

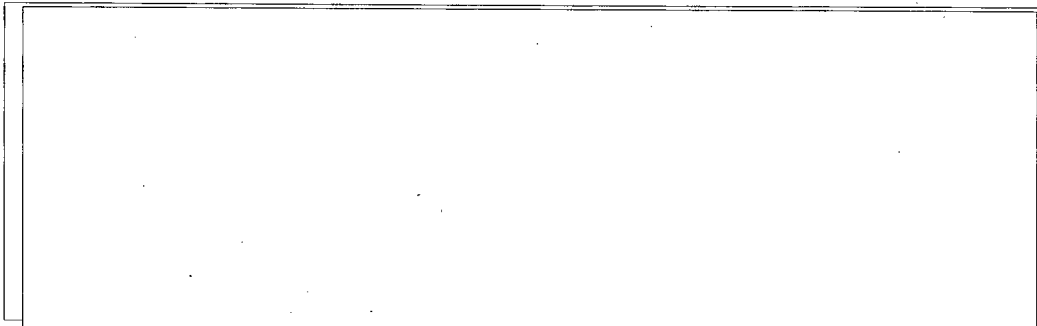
~~Top Secret~~

requirements imposed by doctrine, the availability of suitable weapons and equipment, and an evaluation of potential enemy forces. Organizational forms are also strongly influenced by military history and tradition.

This paper examines major changes in Soviet ground force structure since 1957 in an effort to answer three major questions: How are Soviet ground force organizations at all levels developed? What principles underlie their development? What are the possible directions of future development? A summary of the report begins on page 50.



Sources



Our assessments of Soviet organizations are derived from many sources and are the result of continuing analysis. Therefore, it is not possible to say with assurance that assessments of organizations during one historical period are more likely to be accurate than those of another period. Information from one source with access to pertinent documents on a given period may have provided a more accurate picture than information derived from a source who repeatedly observed a given type of unit as it existed in the field.

In general, information on the combat and combat support units of tank and motorized rifle divisions, some army-level units, and a few front-level missile organizations is considered to be good to excellent. For other units, such as headquarters and service support units, the information varies from fair to poor.

Information on the internal organization and current functions of the Main Organization and Mobilization Directorate is sparse. Personnel known to be in the directorate occasionally contribute articles to the open press explaining policies and procedures relating to such matters as extended service, selection of candidates for Soviet military schools, and the role of the local military commissariat in personnel affairs. References to this directorate [redacted] usually pertain only to its mobilization functions.

General Shtemenko has provided the best available information on the organizational function of the directorate in his



book on the Soviet General Staff.* Although this information generally relates to World War II, Shtemenko specifically ascribes to the General Staff alone the right to make organizational changes in the forces in times of war and peace. This, plus the extraordinary longevity of service on the General Staff of some officers in the directorate, provides the basis for the assumption that it retains the authority it had some 30 years ago.

* Army General S. M. Shtemenko, *General'nyy shtab v gody voyny* (The General Staff in the Years of the War), Vol. 2, Moscow, Voenizdat, 1973. General Shtemenko served as chief of the Operations Directorate of the General Staff during the last years of World War II; chief of the General Staff, 1948-1952; and deputy chief of the General Staff, 1964-1968. While deputy chief of the General Staff, Shtemenko is believed to have had coordination responsibility for the General Staff's administrative and support functions, including those of organization and mobilization. He is presently chief of staff of Warsaw Pact Forces and continues to be a first deputy chief of the Soviet General Staff.

Contents

| | <u>Page</u> |
|-----------------------------------------------------------------------|-------------|
| The Reorganization of 1957 | 7 |
| The Khrushchev Doctrine | 7 |
| Direction of the Reorganization | 8 |
| Principles of Organization | 8 |
| The 1957 Organizations | 11 |
| Testing of the New Organizations | 13 |
| Tactical Doctrine | 13 |
| Equipment Shortcomings | 14 |
| The 1960-61 Debate | 15 |
| The Tank Issue | 15 |
| The Malinovskiy Guidelines | 22 |
| Equipment Development | 22 |
| Organizations | 23 |
| The Debate in Retrospect | 24 |
| Organizational Changes in the Early 1960s | 26 |
| <u>Front and Army Headquarters and Staff</u> | |
| Reorganization | 26 |
| Tank Unit Changes | 26 |
| Reactions to Flexible-Response Strategy | 30 |
| Artillery Claims for Attention | 31 |
| Tank Maintenance Support Requirements | 32 |
| Organizational Changes Since Mid-1960s | 33 |
| Increased Conventional Firepower | 33 |
| Tank Force Improvements | 35 |
| Assessing the Changes | 36 |
| Rationale for Change--A New Doctrine for Net Assessment? | 36 |
| The Current Force | 39 |
| The Front | 39 |
| Tank and Combined-Arms Armies | 40 |
| Tank Units | 42 |
| Motorized Rifle Units | 43 |
| Non-Divisional Artillery | 47 |
| A Universal Division, Army? | 49 |

| | <u>Page</u> |
|-----------------------------------|-------------|
| Summary and Conclusions | 50 |

Charts

| | |
|------------------------------------------------------------------------|----|
| Organization Directorate, Soviet General Staff | 9 |
| Medium Tank Strength in Soviet Tank Armies | 19 |
| Evolution of the Soviet Medium Tank Regiment, 1952-75 | 27 |
| Evolution of the Soviet Motorized Rifle Regiment, 1952-75 | 45 |

Tables

| | |
|-----------------------------------------------------------------------------------------------|----|
| 1. Increases in Conventional Artillery of Soviet Ground Force Divisions, 1967-75 | 34 |
| 2. Immediately Available Front Level Support | 38 |
| 3. Army Organization, Group of Soviet Forces in Germany | 41 |

The Reorganization of 1957

In 1957 the Soviet ground forces were in the middle of a major reorganization, marking their entry into the nuclear age. The major military influences on the reorganization were Soviet development of nuclear weapons (in particular, those for ground force use), a series of troop tests of these weapons and their effects which began in 1954, and the development of doctrines for the employment of the new units and weapons. During the same period, Soviet force planners were under strong pressure from Khrushchev to reduce the overall size of the ground forces, both because he questioned their utility in nuclear war and because he wished to limit expanding military expenditures.

The reorganization had been delayed by Stalin's refusal during the last years of his life to allow discussion among military theorists of the effect nuclear weapons would have on warfare. While Stalin made desperate efforts to develop a nuclear capability, he directed that military doctrine be derived from Soviet military experiences of World War II. As a result, Soviet military organizations in the immediate postwar period were designed to fight only on the conventional battlefield.

The Khrushchev Doctrine

Spurred by Khrushchev in the late 1950s, Soviet writers on tactical and strategic doctrine asserted that a war between the US and the Soviet Union would inevitably result in a massive nuclear exchange. The role of the ground forces in such a war would be to exploit the results of nuclear strikes by medium bombers and missiles and move rapidly and deeply into enemy territory to ensure the complete defeat of opposing forces.

Tank-heavy forces were considered to be ideal for this kind of warfare. Mechanized infantry accompanying the tanks would provide support and mop up remnants of shattered enemy units. The emphasis was to be primarily on nuclear firepower, speed, and shock action. The objectives in Western Europe were the Rhine, the North Sea, and Channel ports. They were to be reached quickly in order to prevent West European mobilization and the delivery of reinforcements from

overseas. Soviet planners expected that massive nuclear strikes would enable them to achieve rates of advance of up to 100 kilometers per day and to complete the campaign in less than 15 days. They believed the use of nuclear weapons coupled with the short duration of the campaign would reduce requirements for conventional artillery and logistic support.

By 1957, under the guidance of such prestigious figures as Minister of Defense Zhukov and Ground Forces Commander in Chief Malinovskiy, line divisions and field armies were developed that were lean in logistical support and conventional artillery but heavy in their reliance on the tank as the primary ground-combat weapon on the nuclear battlefield.

Direction of the Reorganization

The task of restructuring existing forces was given to the General Staff. According to General Shtemenko, the General Staff was the only agency in either wartime or peacetime with the authority to make any changes whatsoever in military organizations.

—Within the General Staff, what was then known as —
the Organization Directorate (*see chart*) had direct responsibility for the reorganization, although the Operations Directorate probably was also heavily involved. Shtemenko describes the relationship between the two as follows:

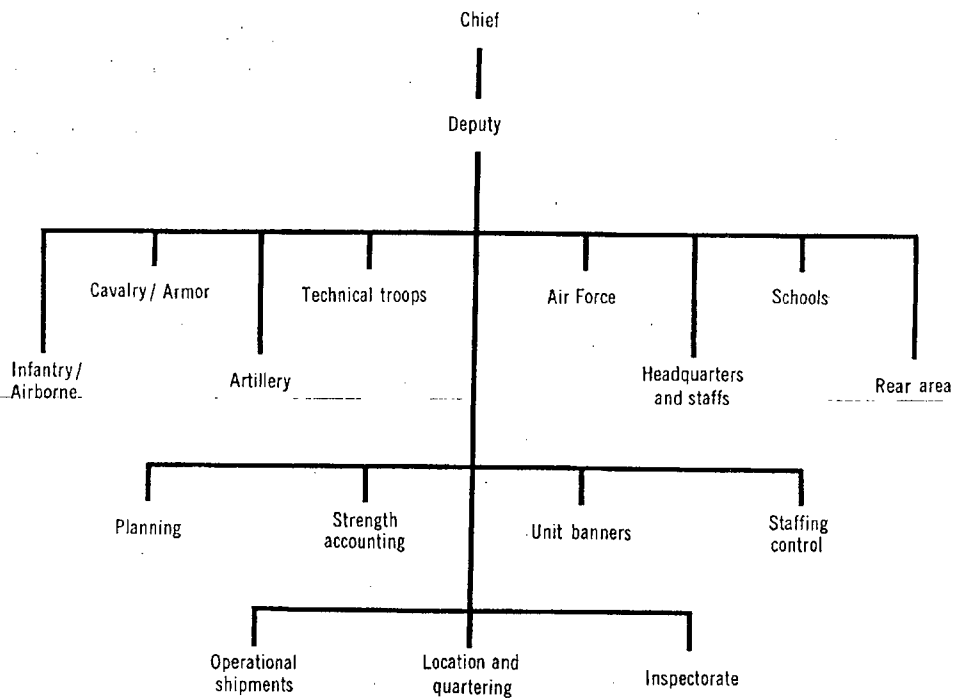
The operators define the aims of the operations and the mission of troops and say what, where, and how to do it. The organizers calculate the number of forces and means and say in what structure it is necessary to have them.

Principles of Organization

The principles followed by this directorate in making organizational changes can be generally deduced from Shtemenko's discussion of the organizational function of the General Staff during World War II. His occasional allusions to the timeless nature of certain principles and his comments on the longevity of certain "organizers"—such as Colonel General N. I.



ORGANIZATION DIRECTORATE, SOVIET GENERAL STAFF* (World War II)



*Prior to World War II, organization and mobilization functions were combined under one directorate in the General Staff. In 1941, in order to relieve the General Staff of some of its work load, this directorate was placed under the People's Commissar of Defense. This arrangement was unsatisfactory, and in May 1943 an organization directorate was established in the General Staff. The mobilization function remained under the defense commissar until sometime after the war when organization and mobilization functions were again combined in the Main Organization and Mobilization Directorate of the General Staff.



Chetverikov, who served on the General Staff for 25 years--suggests that these principles are still regarded as valid.

The first and perhaps most clearly enunciated principle is that of General Staff coordination and control of organizational matters. Recommendations for organizational changes are received from ground force headquarters and commanders in the field, but final approval rests with the General Staff. Of course the General Staff is the executive body for the Minister of Defense and the political leadership and is bound to implement such organizational changes as they might direct. The function of the staff in such cases would be to put changes in the proper form and disseminate them.

Second, although suggestions for organizational improvements are considered in the General Staff and organizations are under constant review, they must remain stable for long periods of time. In the Soviet view, ground force organizations should change only when new weapons and equipment require it or because of specific conditions in a theater of military operations. Stability permits the development of tactical and operational doctrine* suitable to each unit organization and at the same time allows the organization to exert its influence on what the Soviets call military art. The latter relationship is a dialectic one in which changes in doctrine will soon be reflected in organizations, and vice versa.

Third, a thorough analysis of enemy units and their equipment is an important factor in determining

* Prior to World War II it became apparent to Soviet military theorists that, because of the projected scale of operations along any future front involving Soviet forces, an intermediate concept was needed for activities involving forces greater than those in action at the tactical level and less than those at the strategic level. The term they chose for this intermediate category was "operational," recognizing that this would inevitably cause ambiguity because of the term's widespread use in its more general sense. Thus, doctrine pertaining to units at corps level and below is considered tactical and that for an army or a single front is called operational. Strategic doctrine applies to one or more fronts.

the size, armament, and equipment of corresponding or countervailing units.

The organizational influence of the General Staff on military operations does not end with the creation of standard units, which in Soviet organizational practice include divisions, brigades, separate regiments, and battalions. The Soviet front (army group)--an echelon established in wartime--is formed by assigning a number of armies, separate brigades, regiments, and battalions to a headquarters drawn from the staff of a military district or group of forces. The exact composition of each front will depend on its anticipated mission. Armies are similarly structured by subordinating standard divisions and separate units to headquarters that are in existence in peacetime. The formation of these units is a major organizational tool of the General Staff.

The 1957 Organizations

After the 1957 changes were implemented,* the front continued to be the highest operational echelon of the armed forces, combining under one command ground, air, and at times naval elements. The exact composition of a front would depend on its mission, which might be of either operational or strategic significance. Missile and rocket brigades equipped with Scud missiles and FROGS provided tactical and operational nuclear fire support for divisions and armies. Conventional fire support was furnished by a variety of separate artillery divisions equipped with heavy gun-howitzers, mortars, rockets, and long-range artillery.

The existing mechanized and combined-arms armies were reorganized into either tank armies or streamlined combined-arms armies. The tank army was to consist of four tank divisions with necessary support and service units, while the combined-arms army consisted of three or four motorized rifle divisions, one

* The reorganizations that occurred during this period apparently were phased. According to Soviet sources, the motorized rifle division appeared "by 1957," the tank division "in 1957," and new front and army headquarters organizations in 1957. Actually, the conversion of all Soviet units to the new organizations continued at least through 1959.

or two tank divisions, and support and service units. Conventional and nuclear fire support for both types of armies was furnished by a rocket brigade equipped with FROGs, multiple rocket launchers, and conventional artillery brigades.

The corps--as an intermediate echelon between army and division--was eliminated in 1957, and most corps troops were transferred to the army level. This change eliminated what the Soviets considered a superfluous command echelon. In several military districts and in the Central Group of Forces, however, corps headquarters have continued to function as an independent element under military district or group of forces control. In some cases, the corps organization is used because of an operational and geographic situation requiring a force in peacetime greater than a division but less than an army. This is the case on Sakhalin Island. Along the Sino-Soviet border during the buildup of Soviet ground forces some corps were formed that eventually became armies.

Four types of divisions were established in the 1957 organization--tank, heavy tank, motorized rifle, and airborne. The tank division was a smaller, simplified version of the old. It was built around two medium tank regiments, a motorized rifle regiment, and a heavy tank/assault gun regiment. Personnel strength was reduced from the estimated 13,500 men in the old division to an estimated 8,000 in the new. This was accomplished by eliminating a 160mm mortar battalion and a 122mm howitzer battalion from the division artillery, and by removing the motorized rifle battalion from the medium tank regiment and the submachine gun battalion from the self-propelled gun regiment. The reductions were consistent with a doctrine for tank division employment on the battlefield which anticipated that tank-heavy formations would not need extensive infantry and artillery support while exploiting nuclear strikes.

The history of the heavy tank division is unclear. There were references to such a division in the early 1960s, but the continued existence of such divisions apparently became dependent on the future of the heavy tank. A debate on the utility of the heavy tank was in progress at the time (*see discussion on page 15*).

After it was decided to discontinue production, the heavy tank division was eliminated.

The motorized rifle division was developed from the mechanized division. Its main maneuver elements were three motorized rifle regiments (essentially organized the same as the old mechanized regiments) and a medium tank regiment. Divisional strength was reduced from some 15,500 men to around 10,000 men.

There was no further development of the rifle division and it disappeared in about 1959, after the reorganization was completed.

Information on the organizational development of the seven Soviet airborne divisions is sketchy, particularly in the early part of the period under discussion. For this reason, the organizational development of these units is not discussed in this paper.

Testing of the New Organizations

[redacted] The forces have received new weapons and equipment, and there have been modifications in doctrine. Adaptation of unit organizations to these changes has continued to be a function of the Main Organization and Mobilization Directorate --the enlarged successor to the Organization Directorate.

Tactical Doctrine

The field exercises designed to test these organizations stressed rapid assembly of reinforced task forces and movement to contact the enemy over widely separated axes of advance--often crossing significant obstacles--either in direct exploitation of nuclear strikes or to subdue opponents recovering from their effects. The reinforced units were further dispersed

by the creation of ad hoc task forces (the advance and flank guards) for march security. In certain circumstances task forces known as forward detachments were created to move ahead of the main body and seize key objectives. Forward movement was to continue day and night to achieve planned rates of advance and prevent the enemy from reorganizing. Tactical and operational doctrine thus complemented strategic doctrine. Emphasis was on speed of execution to capitalize on the effects of nuclear strikes and reduce the effects of passing through contaminated areas. The dispersal of mobile task forces built around the tank was intended to complicate the enemy's targeting problem and increase the probability that some of these balanced combat elements would reach their objectives.

Equipment Shortcomings

The Soviets were acutely aware, however, that their line divisions as a whole were only marginally equipped to function under this doctrine. Among Soviet weapons, only the tank provided protection against nuclear effects. Armored personnel carriers were not available in quantity and, because they had no overhead cover, they provided the infantry little protection. Artillery gun crews were similarly vulnerable. No nuclear-capable weapon was available at division level and there were deficiencies in the antiaircraft defense of the field army, the quantity and quality of communications, electronic warfare and engineer equipment, and the capabilities of available decontamination equipment. Few vehicles were equipped with night vision devices, which were in an early state of development.

The 1960-61 Debate

Among senior Soviet officers, differing opinions were expressed on the suitability of the 1957 organizations. Some expressed doubts about the ability of tank armies and divisions to function on the modern battlefield in view of advances in antitank weapons.

In 1960-61 these dissents were expressed in a lively, officially sanctioned debate on the impact of nuclear technology on warfare in general and on ground force organizations in particular. Because of the intimate relationship between organizations and their arms and equipment, the discussants predicated their suggestions for organizational improvement on their views about what new weapon systems should be developed to equip the organizations.

Some of the major issues in the debate provide insights on the Soviet approach to organizational development. Current organizations evolved as a direct result of decisions made at the conclusion of the discussion. Some of the issues raised at that time, however, were not fully resolved. A review of the various positions taken by the proponents and opponents of change provides important background for current developments.

The Tank Issue

Marshal of Tank Troops Pavel Rotmistrov (commandant of the Tank Academy) and Army General A. Zhadov (deputy chief of the Ground Forces) were among the principal antagonists. Rotmistrov defended the utility of medium and heavy tanks against those who argued that developments in armor-defeating ammunition would make the tank obsolete. Rotmistrov pointed out that anti-tank weapons were basically a means of defense, their crews had no protection against nuclear effects, they were easily destroyed, and the data on their accuracy were determined under firing range, and not combat, conditions. Tanks, on the other hand, in addition to providing protection against nuclear effects, could reduce the effectiveness of antitank weapons by laying smoke screens and taking advantage of the

terrain. According to Rotmistrov, tanks moving rapidly and firing on the move would always have superiority over antitank weapons. He also attempted to counter any claim that future improvements in anti-tank weapons would make them an even greater threat by pointing out that there would also be new developments in tank technology.

On specific questions of tank development, Rotmistrov strongly defended the continued production of the T-10M heavy tank, despite its high cost, on the basis that it was superior to the US M-60 in many respects. He warned that rejection of the T-10M could lead to the loss of Soviet qualitative superiority on the battlefield.

Rotmistrov returned to the question of costs in his discussion of tank organizations. Noting suggestions that the existing tank and motorized rifle divisions be replaced by a universal division, he stated flatly that the national economy at that time could not support such a huge tank inventory. He also pointed out that there were some areas in the Soviet Union and even in Western Europe where it was necessary to operate with a limited number of tanks or even without them. Finally, Rotmistrov asserted that the inadequacy of a hypothetical universal division would be proved by a nuclear explosion, which would put everything on the battlefield out of commission except the tank crews who would have armor protection. He was implying that the universal division would lead to extensive dispersal of tanks and to the loss of all the advantages they possess when organizationally massed.

Rotmistrov defended the continued utility of the tank army organization by claiming that tank armies had played a major role in most Soviet victories during World War II. He predicted that the tank army would become even more important in a nuclear war, the ground phase of which would be characterized by a series of meeting engagements.

In rebuttal, General Zhadov questioned Marshal Rotmistrov's evaluation of the relative merits of the T-55 and the M-60 tanks, claiming that the T-55 outclassed all foreign tanks in such parameters as

cruising range, maneuverability, armor protection, and weight. On the other hand, in Zhadov's judgment, the T-10M was only slightly superior to the M-60 and was three times as expensive as the T-55. Zhadov believed Soviet tank development should be concentrated on improving the armament of the T-55 and in developing a light tank capable of being transported by air. He also advocated improvement of the tank crew's protection against nuclear, chemical, and bacteriological agents and reduction of the crew size from four to two or three men by automating the processes of firing, driving, and communicating.

Zhadov questioned most of Rotmistrov's recommendations on organizational development. He also cast further doubt on the future of the heavy tank by citing many exercises that showed the heavy tank regiment (then in the tank division) reduced the maneuverability of the division and complicated the supply problem, presumably because of the need to carry 122mm ammunition and heavy tank spare parts. He recommended that heavy tanks be placed in heavy tank divisions or in separate tank regiments.

— In discussing army organization, Zhadov was, not surprisingly, less enthusiastic about the tank army than Rotmistrov. He professed not to know who had proposed abolishing tank armies, and he acknowledged their great striking power. But he again cited exercises that showed a combined-arms army under certain circumstances was equal to or even superior to a tank army. As for meeting engagements, Zhadov denied that the tank army would have an advantage over the combined-arms army in such battles, asserting that nuclear weapons would ultimately decide such engagements.

The tank and tank units advocated by Rotmistrov generally were supported by Colonel General of Tank Troops P. Poluboyarov, chief of the Main Armor Directorate. Poluboyarov, however, avoided the question of the comparative effectiveness of the T-55 and the T-10M versus the M-60. Instead he urged improvement of existing tanks until such time as medium tank armament would make the heavy tank superfluous. He also endorsed the development of an airborne tank.

Poluboyarov devoted considerable attention to the need for an infantry combat vehicle. He suggested a

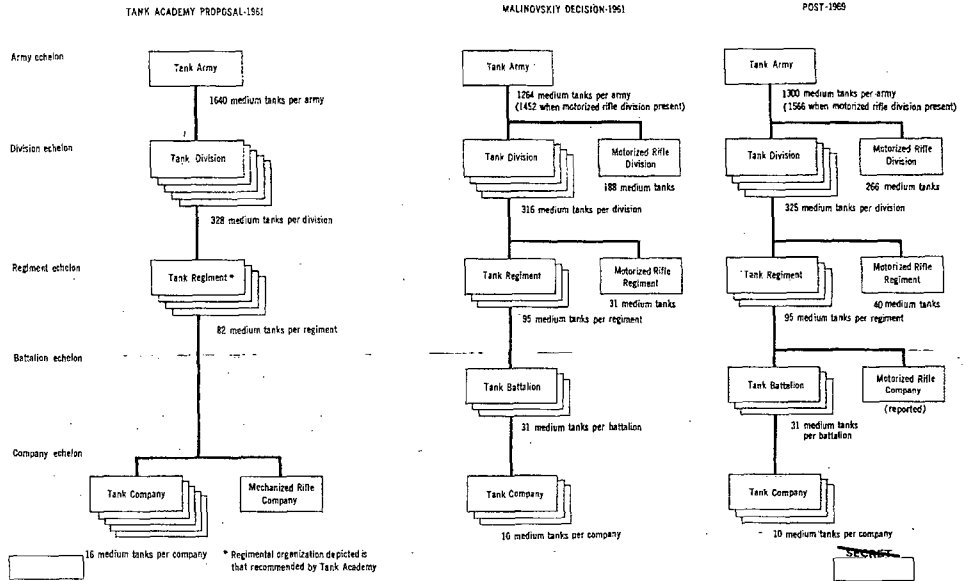
vehicle be created, as inexpensively as possible, that would be fully armored, tracked or half-tracked, and air transportable, and have the same cross-country mobility as the tank, with antinuclear protection for the crew and the troops. Its armament would include both machine guns and missile mounts. These vehicles would permit the infantry to fight successfully on its own and provide more effective support to tank units. The new vehicles would be distributed to units in the field on the basis of the unit's operational mission and how many the country could afford. Poluboyarov suggested these vehicles go initially to the motorized rifle units of tank divisions and armies. Subsequently, other divisions located in the most important theaters of military operations could be equipped with the vehicles.

To increase further the mobility of tank divisions and armies, Poluboyarov also suggested tentatively that the Soviet Union develop self-propelled artillery with a nuclear capability.

On organizational matters, Poluboyarov strongly urged that the tank division and the tank army be retained. He did, however, advocate that these units be equipped with the same type of tank. He suggested that heavy tank regiments and divisions be placed under army or front control to be used as required. The ideal tank army, in Poluboyarov's view, would have four or five tank divisions, each consisting of four regiments of medium tanks. The motorized rifle regiment in the tank division would be disbanded and each tank regiment would be given a motorized rifle battalion.

Perhaps the most radical equipment and organizational proposals were advanced at the Tank Academy during a "military scientific conference" at which Marshal Rotmistrov was the keynote speaker. The "opinions" of the conference included a proposal that a new tank be developed which would eliminate the need for conventional artillery "to the extent that it has been present up to this time." Tube artillery would be replaced by rocket artillery mounted on vehicles of sufficient mobility to keep abreast of the tank and with armor protection against nuclear effects. The conference also proposed that all aux-

MEDIUM TANK STRENGTH IN SOVIET TANK ARMIES



Page# 20

Blank Page or Missing from Archival Copy

iliary units in tank organizations have the same mobility, maneuverability, and ability to withstand nuclear attack.

In the opinion of the conference, tank unit organizations should be structured to take full advantage of the combat characteristics of the tank. The tank army should consist of five tank divisions, a missile brigade, an antiaircraft defense (PVO) division, separate reconnaissance units, rear service units, and separate tank and mechanized units in reserve. The tank division (*chart, page 19*) would consist of four tank regiments, each regiment consisting of either three tank battalions and one mechanized battalion or five tank companies and one mechanized rifle company. The motorized rifle regiment in the tank division would be eliminated.

The regimental organization of five tank companies and a mechanized rifle company was strongly recommended to replace the battalion command, which simply duplicated the orders of the regimental commander, usually employing its companies in the time-honored pattern of two companies up and one back. A tank regiment employing two battalions forward and one battalion back would thus only have four companies forward. The tank battalion was also described as a compact and attractive target for nuclear weapons. The proposed organization of five tank companies--each company consisting of 16 tanks instead of 10--would be capable of maneuvering over a broader zone, moving along one or several axes, and therefore would be less vulnerable than current battalions.

The conference calculated that the proposed tank army (composed of five tank divisions, each having four of the five-company regiments) would have a greater number of tanks than a US field army of nine divisions. By having five divisions the army would be capable of operating on two axes if necessary and bringing superior combat power to bear in a meeting engagement without employing all of the army's forces. The availability of two independent tank regiments and one independent mechanized regiment in the army reserve would permit reinforcement of forward divisions without drawing on units of the second echelon.



The Malinovskiy Guidelines

In late 1961 Marshal Malinovskiy, Minister of Defense since 1957, gave his views on these questions and, in effect, established guidelines for Soviet organizational development that remained valid until his death in 1967. In general, Malinovskiy's views coincided with those who had expressed confidence in the continued utility of the tank, the tank division, and the tank army. He did not, however, endorse some of the more extreme views on tank unit organizations that had been presented at the Tank Academy. He also chose to compare the characteristics of the then new T-62 with those of the M-60 and stress future tank and armored vehicle development. Apparently he did this to quiet the critics of equipment then in service and provide a firmer basis for his commitment to tanks and the organizations built around them.

Equipment Development

In one of his most trenchant judgments, specifically addressed to "certain ultra-innovators," Malinovskiy strongly endorsed the future utility of the tank on the nuclear battlefield. To support his position, Malinovskiy recalled the central role of the tank in the campaigns of World War II and described the combat characteristics of tanks then in service that equipped them for a similar role in a nuclear war. He also outlined improvements under development to enhance the combat capabilities of future Soviet tanks and projected other equipment required to support them on the battlefield.

According to Malinovskiy the tank then under development would weigh 34 tons and have a 115mm smoothbore gun with an automatic loader enabling it to operate with a crew of three (instead of four) men. Subsequently it would be equipped with a rifled gun with mechanized loading and would have complete protection for the crew against nuclear, chemical, and bacteriological weapons. In the more distant future it would be armed with a guided missile having a range of three to four kilometers. The new tank would have armor capable of defeating HEAT ammunition used by NATO antitank weapons.

Malinovskiy also foresaw that the improved ballistic characteristics of the new medium tank's gun system would equal or surpass those of the T-10M heavy tank and cause its eventual replacement.

In addition to a new tank, Malinovskiy stated a requirement for a new armored personnel carrier--a vehicle capable of transporting an infantry assault group, "which it is now completely impossible to transport on the body of the tank."

Malinovskiy considered the combat capabilities of conventional tube artillery to be exhausted. He believed tank troop operations should be supported by the tactical air force and by tactical and operational missiles.

Organizations

On organizational questions Malinovskiy rejected the suggestion that a single field army organization be adopted to replace the existing tank and combined-arms armies. He claimed that the tank army ensured Soviet forces a great advantage over NATO forces in conducting combat operations in a nuclear environment. He also dismissed the proposal that a universal line division organization be developed to replace those of the existing tank and motorized rifle divisions. Malinovskiy reminded his readers that it had not been possible to create a universal division to meet the varied conditions of the western theater and argued that Soviet divisions might be called upon to fight in areas where conditions were even more varied.

In his discussion Malinovskiy made frequent references to the equipment and organization of US and NATO forces in Europe. He characterized the command and control of NATO field armies as overly complex and their logistic services as cumbersome. In contrast he cited the absence of the corps echelon in Soviet field armies and the ongoing process of streamlining logistic support for the Soviet combined-arms army.

Malinovskiy indicated that some organizational changes were still under consideration, including

- assigning single-type tank regiments to the tank division
- deactivating the motorized rifle regiment in the tank division and assigning its battalions to the three tank regiments
- eliminating the battalion echelon in the tank regiment
- placing the heavy tank division under front rather than field army control.

The Debate in Retrospect

Although the debate was a milestone in Soviet ground force organizational development, no personalities connected with the Main Organization and Mobilization Directorate were public participants. Instead, the articles advancing the contending positions were signed by senior ground force officers.*

This suggests that much of the data and some of the ideas in the articles may have been assembled by subordinates. The clash of views between Rotmistrov and Zhadov, in particular, may have represented a strong difference of views between the tank formation enthusiasts on the faculty of the Tank Academy and the combined-arms advocates in Ground Forces headquarters.

The authoritative tone of Malinovskiy's statement, which appeared to resolve the debate, suggests that the Minister of Defense had called on the Organization and Mobilization Directorate for expert support. At a

* Curiously, Marshal A. A. Grechko, who was commander in chief of the Ground Forces when the debate started and then became commander of Warsaw Pact Forces, did not participate even though questions of ground force organization were of obvious importance to him in either position.

minimum, the directorate probably furnished data on existing and planned organizations. Beyond some rather simple comparisons of foreign and Soviet tanks, however, the level of analysis as published was relatively unsophisticated.

Malinovskiy's view contained three principal arguments. He stressed at some length the important role tanks and tank units had played in the winning of World War II; he repeatedly returned to the combat characteristics of the tank that enabled it to survive on the nuclear battlefield; and, while he expressed confidence that the vulnerability of the tank would be reduced by technological developments, he vigorously endorsed the continued utility of available Soviet tanks in modern war. Having strongly expressed confidence in the tank's capabilities on the nuclear battlefield, Malinovskiy simply aggregated the capabilities of tanks in his endorsement of the tank army. Here, and elsewhere in that part of his judgment touching on organizational matters, he derived substance for his argument from comparison of Soviet and NATO organizations.

Within the military services, the Malinovskiy article could be counted a victory for the more conservative spokesmen such as Poluboyarov and to a lesser extent for the tank advocates such as Rotmistrov and others of the Tank Academy. The "ultra-innovators" who favored a completely new look at the tank question were rebuffed. Zhadov's recommendations on the heavy tank, heavy tank units, and the tank army were also rejected despite his well-reasoned presentation. Given the demonstrated inclination of Soviet military leaders toward mobile war and the heavy emphasis they had placed on the study of World War II land operations, Malinovskiy's decision was hardly surprising. Nor was it surprising that it accorded with Khrushchev's announced ideas on future wars-- they would be nuclear, missiles were to be the principal delivery vehicles, and tank formations would be essential to the successful exploitation of nuclear strikes on the battlefield.

Organizational Changes in the Early 1960s

Front and Army Headquarters and Staff Reorganization

The front and army staffs established in 1957 were based on those existing at the end of World War II, and it was soon apparent that they did not meet anticipated Soviet operational requirements. Mobilization plans required that front and some army headquarters were to be staffed by military districts and groups of forces. In addition, some headquarters required the further mobilization of reservists to reach their authorized wartime strength levels. The resultant field organizations were cumbersome and immobile.

After a series of tests conducted at the military district level under the supervision of the General Staff, new organizations for front and army field commands were approved by Malinovskiy in late 1962 or early 1963. The new field commands did not require mobilization and were sharply reduced in strength--the front by 45 percent (from approximately 1,300 to 715), the combined-arms army by 50 percent (from approximately 500 to 250), and the tank army by 35 percent (possibly to around 250). The strength reductions were predicated on the development, receipt, and assimilation of advanced communications, data-handling, and computer technology, some of which was evaluated during the 1962 tests.

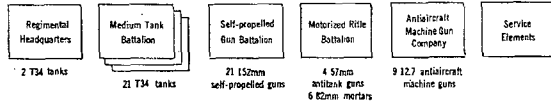
Centralization of command was the overriding principle on which the new command and staff structure was built. The Soviets realized that traditional methods of decisionmaking involving extended briefings and estimates of the situation would be too slow in a nuclear environment. Instead, it was the commander's responsibility to be constantly abreast of the situation and prepared to make decisions, with staff consultations limited to exchanges of views with the chief of staff.

Tank Unit Changes

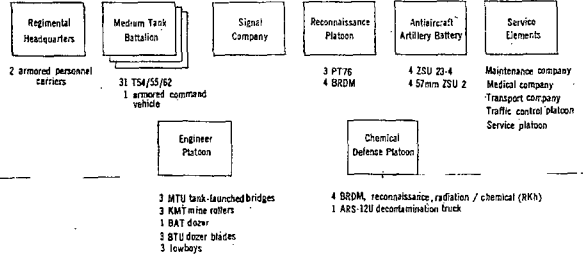
Only one of the changes in tank units under consideration in the early 1960s may have been adopted

EVOLUTION OF THE SOVIET MEDIUM TANK REGIMENT, 1952-75

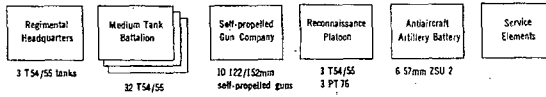
1952



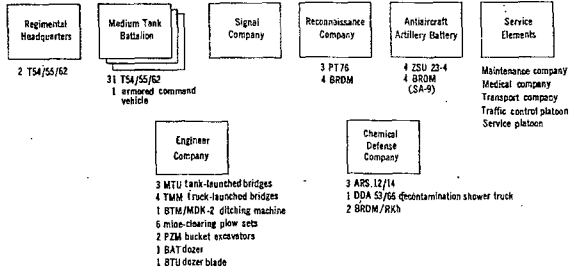
1969



1958



1975



SECRET

Page# 28

Blank Page or Missing from Archival Copy

by the time of Malinovskiy's death in 1967. The 1957 tank division had two medium tank regiments and a heavy tank/assault gun regiment. In the 1962-64 period the heavy tank/assault gun regiment was replaced with a medium tank regiment. Some of the heavy tank/assault gun regiments were retained as independent regiments at army level but, although there were references during this period to heavy tank divisions, no firm evidence was ever received on the exact organization of these divisions.

The suggestion on the subordination of the heavy tank division became moot with the decision to stop production of heavy tanks in the mid-1960s. By that time, presumably, the 115mm gun of the T-62 had been proven to have the same capability to penetrate armor as the 122mm gun on the T-10M, and the heavy tank division disappeared as an organization.

The two suggestions concerning the organization of the tank regiment were not accepted. The first suggestion--assignment of a motorized rifle battalion to each tank regiment in the tank division--was an attempt to return to the organization of the mid-1950s when each tank regiment had an organic motorized rifle battalion. (See chart.) Implementation of this proposal, however, would have eliminated the motorized rifle regimental headquarters and thereby would have limited the division commander's flexibility in organizing task forces.

The second suggestion--elimination of the tank battalion echelon in the tank regiment--may have clashed with traditional Soviet views of the ideal span of control for tank units. For example, the three-tank platoon was retained long after Soviet tank-to-tank communications were adequate to control a larger platoon.

Reactions to Flexible-Response Strategy

In the mid-1960s, Soviet military theorists, strongly influenced by the shift in US strategy from "massive retaliation" to "flexible response," accepted the possibility that a war with NATO might begin with an indeterminate phase in which only conventional weapons were used. The fall of Khrushchev in October 1964 occurred as this shift in Soviet strategic views was being considered. The removal from power of the most prominent spokesman for a military policy heavily dependent on nuclear weapons probably facilitated acceptance of modifications in doctrine to meet the new Western approach to war in Europe.

If usual Soviet practice was followed, the modifications in doctrine caused a thorough reexamination of divisional and army organizations. The modified doctrine required improved conventional capabilities in units, without reduction in their ability to function in a nuclear environment. Apparently there was no full-scale debate over the structural changes required in the existing organizations, which had been deliberately designed for a short, nuclear war. Conventional artillery, motor transport, and maintenance support had been held to low levels, ostensibly to enhance mobility but probably also to hold down costs.

To a large extent the correction of these deficiencies was a budgetary matter--for example, furnishing units more and larger trucks to supply the increased amounts of conventional ammunition needed to fight the slower moving conventional land battle. Fortunately for the ground forces, Khrushchev's successors approved the modified doctrine and the increased amounts of equipment needed to implement it.

At about this time they also authorized a build-up of general purpose forces along the border with China. This, plus the later requirement to station forces in Czechoslovakia, combined with an increase of weapons and equipment in existing organizations to raise the personnel strength of the ground forces.

Artillery Claims for Attention

During the period when increases were under consideration (1964 to 1968) Soviet conventional artillerymen lobbied for both qualitative improvements and quantitative increases. Artillery logisticians pointed out that even though there had been a three- or four-fold decrease in the artillery of a front, there was only enough ammunition in divisions and armies to last for the first one or two days of intensive combat.

Other artillerymen argued that even when nuclear weapons were used, available artillery was inadequate to support offensive operations. One calculation showed that a combined-arms army breaking through a defensive sector manned by a US mechanized brigade would require the support of an entire artillery division to neutralize the forward defenses.

Along with these complaints, Soviet artillerymen advanced strong arguments for the introduction of a new family of self-propelled artillery, particularly to replace towed artillery in tank units. Proponents of these new weapon systems argued that although the cross-country mobility of Soviet artillery prime movers had improved, the mobility of the forces they were supposed to accompany had improved even more. They also pointed to the prominence of self-propelled artillery in the US forces.

These advocates took special pains to make clear that self-propelled artillery differed from the assault guns used by Soviet forces in World War II. The new weapons would be capable of high-angle fire and could be used to reach enemy tactical nuclear weapons, anti-tank systems, artillery, and mortars in protected positions. Assault guns and tanks with flat-trajectory, direct-fire weapons would have difficulty destroying such targets.

The recommended characteristics of the new systems included the ability to withstand nuclear blast and to pass through contaminated zones. The proportion and calibers of guns, howitzers, and mortars was to be determined by the need of the field forces and, to some extent, existing ammunition. It was also recommended that compatible command, staff, and reconnais-

sance vehicles be developed to accompany the new weapons.

In presenting the case for more and better artillery, Soviet artillerymen did not hesitate to point out the unsuitability of tanks to perform indirect fire missions. In doing this they were going directly counter to the ideas of Chief of the General Staff Marshal Zakharov, an old artilleryman who apparently considered the failure to use tank guns in this role a shameful neglect of an important capability.

Soviet artillerymen also raised the issue of nuclear artillery during these discussions. The degree to which NATO nuclear artillery complicated the Soviet targeting problem in either conventional or nuclear war was easy to demonstrate as was the reverse, that the introduction of Soviet nuclear artillery rounds could simplify the problem. Here the gunners seemed to be in contention with Soviet missile and rocket advocates, with the artillerymen asserting that guns provided a more accurate means of delivering a nuclear round than a tactical rocket or missile. Greater accuracy would permit the use of smaller yield weapons--allowing Soviet troops to remain closer to the enemy--and more rapid exploitation of strikes. Rocket-assisted projectiles equipped with nuclear warheads, according to these same sources, would reduce the rate of fire compared to that achieved by standard rounds. This may indicate that each existing rocket-assisted round required special preparation before firing.

Tank Maintenance Support Requirements

In a criticism of the 1957 organizations expressed just before the modification of the new doctrine (and the fall of Khrushchev), Soviet tankmen exposed the inadequacies of unit tank maintenance and repair facilities. They contended that in the event of a general war forward units could expect few, if any, tank replacements in the first days, and that available repair facilities were incapable of restoring enough tanks to replace expected losses. Among the measures recommended to overcome this shortcoming were

- the creation of separate tank repair battalions as a mobilization measure
- the establishment of a tank repair battalion for each tank and combined-arms army. Companies of these battalions would be placed in direct support of advancing divisions.

Organizational Changes Since Mid-1960s

Changes in Soviet organizations began to appear in the late 1960s. These changes were related to the modified doctrine and in response to criticisms such as those outlined above. Whether they were decided prior to Malinovskiy's death in early 1967 is not known. In the 1967-68 period a series of major events involving the ground forces could have provided bureaucratic justification to postpone full implementation of organizational changes--the change of command itself, implementation of the 1967 military service law, the events surrounding the invasion of Czechoslovakia, and the equipment drain of the Sino-Soviet border buildup.

Increased Conventional Firepower

By 1967 significant increases began to be observed in the field, antitank, and antiaircraft artillery of the motorized rifle divisions and in the field and antiaircraft artillery of the tank divisions (see Table 1), with an accompanying increase in the capacity and number of cargo trucks for ammunition supply. Also, somewhat later, from two to six additional 85mm or 100mm gun or 122mm howitzer batteries began to appear in the motorized rifle regiments of divisions on the Sino-Soviet border. Subsequently, similar increases began to be observed in the motorized rifle regiments in the western USSR.*

* two additional batteries of 122mm howitzers are to be added to the motorized rifle regiments of divisions in the Group of Soviet Forces in Germany. There has been no evidence to confirm this report.

Table 1

Increases in Conventional Artillery
of Soviet Ground Force Divisions, 1967-75

| Unit | Weapon or unit replaced | Weapon or unit introduced |
|------------------------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Motorized rifle regiment | | 6 122mm howitzers (some regiments are equipped with 122mm self-propelled guns; others are equipped with 18 122mm howitzers) |
| | 6 57mm antitank guns | 12 73mm SPG-9 recoilless guns; regiments equipped with BMP have 6 of these weapons |
| Division artillery regiment, tank and motorized rifle divisions | 122mm howitzer M-30 | 122mm howitzer D-30 |
| 152mm howitzer battalion, artillery regiment, motorized rifle division | | 6 152mm howitzers added, increasing strength from 12 to 18 (towed howitzers being replaced by self-propelled howitzers in some divisions) |
| Artillery regiment, tank division | | Number of 18-tube battalions of 122mm howitzers increased from 2 to 3; one battalion now being equipped with 152mm self-propelled howitzers |
| Rocket launcher battalion, motorized rifle and tank divisions | BM-14 (16 rds, 140mm) BM-24 (12 rds, 240mm) rocket launchers | BM-21 (40 rds, 122mm) rocket launcher; number in battalion raised from 12 to 18 |
| Antitank battalion, motorized rifle division | 100mm gun M-1955 | 100mm gun T-12; battalion increased from 12 to 18 tubes |
| FROG battalion, motorized rifle and tank division | | Increased from 3 launchers to 4 |

Tank Force Improvements

In the mid-to-late 1960s, increases also began to be observed in the number of tanks in Soviet tank and motorized rifle divisions. Separate tank battalions of up to 55 tanks were found in some motorized rifle divisions, and then, about 1969, the number of tanks in tank battalions of motorized rifle regiments began to be increased from 31 to 40. Various combinations of medium tanks, heavy tanks, and assault guns were also found in regimental-size units which are believed to be subordinated to armies or to the groups of forces. As these changes were being observed, improved weapons and equipment continued to be introduced to the ground field force as they became available. Included were new armored personnel carriers (BMPs), self-propelled artillery, surface-to-air missile systems, trucks with increased load capacity, improved field communications equipment, decontamination equipment, mobile gap- and stream-crossing equipment, and maintenance vehicles.

In 1974, the Soviets apparently began full-scale production of the T-72 medium tank. [redacted] its main armament appears to be longer than the 115mm smoothbore gun on the T-62, suggesting higher muzzle velocities and improved accuracies. It is reportedly an automatically loaded smoothbore weapon. The type and thickness of the turret and hull armor are not known. The exact relationship of this tank to the one described by Malinovskiy in 1961 has not been determined. Although the T-72 apparently meets most of his desiderata for a new tank, there have been several unacceptable test models between it and the T-62, including one which may have been a missile-firing tank.

Assessing the Changes

The introduction of new equipment and changes in unit organization have proceeded gradually and appear to be still in progress. Irregularities have appeared in ground force organizations as they are observed in the field, possibly because of Soviet policies which occasionally allow the retention in units of older equipment for a period of time. During the past few years Soviet forces have given the appearance of being in a state of organizational transition, for which various rationales have been suggested.

Rationale for Change--A New Doctrine
for Net Assessment?

Coming on the heels of the doctrinal shift of the mid-1960s, the qualitative improvements and quantitative increases in Soviet ground forces--particularly in central Europe--appear to be directly related to acceptance of the possibility of at least an initial period of conventional war there. However, although the new weapons and equipment are eminently suited for conventional operations, the mechanized weapon systems, particularly the additional tanks, the BMP, and the self-propelled artillery, also improved the capability of the field forces to operate on the nuclear battlefield. New trucks with increased cargo-carrying capacity have given the divisions greater logistic staying power than those of the early sixties. Transport can also be mobilized from the local civilian economy, and additional motor transport can be sent from the USSR.

The organizational and equipment changes also reflect diminished Soviet optimism on the rates of advance that can be achieved using nuclear weapons as a primary means of fire support. As early as 1961 Malinovskiy recognized the threat to armor of modern antitank weapons and noted that even on axes where nuclear weapons were used, some antitank weapons would survive. As the number of these weapons has increased in the NATO field force and as their quality has improved, the necessity for increasing the artillery supplement to nuclear firepower has also grown.

Similarly, recognition of the problems of overcoming obstacles and barriers either erected by the enemy or caused by nuclear weapons has increased the requirement for engineer and chemical support troops and equipment.

The traditional Soviet method for determining the force and weapon requirements for a given combat operation is to make a detailed calculation of the weapons and forces of various types on both sides to decide the proper ratios necessary to achieve an overall military superiority over the enemy. There is evidence such calculations continue to be made in Soviet-directed exercises in Europe, and that Soviet data on NATO forces are accurate. East European delegates to the MBFR talks have attributed the size of the Warsaw Pact tank force to the large number of nuclear weapons available to NATO. However, NATO's efforts to improve its antitank posture versus that of the Pact may also have caused Soviet force planners to consider whether to accept less favorable force ratios or to improve the size and capabilities of their forces.

Force planners may also be considering revisions in acceptable force ratios as further improvements are made in the effectiveness of antitank weapons. Here the extent to which the experience of the October 1973 war in the Middle East is accepted as a valid demonstration of the improved capabilities of these weapons will be a critical factor. The current number of Soviet tanks in the forward area, however, suggests Soviet planners may have anticipated these developments and are prepared not only to meet the increased number of antitank weapons with an "avalanche of tanks," in the words of Marshal Rotmistrov, but also with augmented conventional artillery.

Table 2
Immediately Available Front Level Support

| | Nuclear capable | | Conventional artillery | Antiaircraft defense | Signal | Comint | Electronic counter-measures | Engineer | Chemical | Logistics |
|-----------------------------------|---------------------|--------------------------------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------------------------------------------------------------|
| Group of Soviet Forces in Germany | 1 tactical air army | 3 Scud-B brigades | 1 artillery division 1 antitank battalion | 1 SA-4 brigade 2 SA-3 brigades 1 SA-2 regiment 1 AAA regiment | 2 signal brigades 1 signal regiment | 1 radio intercept regiment 1 radio/radar regiment 2 early warning regiments | 2 ECM battalions | 2 ponton bridge regiments 1 engineer regiment 3 assault crossing battalions 1 heavy ponton bridge regiment | 1 chemical defense battalion | 1 motor transport brigade 1 pipeline brigade |
| Far East Military District | 1 tactical air army | 2 Scud-B brigades 1 Scale-board brigade | 1 artillery division* 1 heavy artillery brigade 2 multiple rocket launcher regiments | 1 SA-4 brigade 1 SA-2 regiment | 2 signal brigades 2 signal regiments 1 signal depot | 2 regiments | | 2 ponton bridge regiments 1 engineer regiment 1 assault crossing battalion | 2+ chemical defense brigades | Motor transport reserves in depots. No pipeline units identified. |
| Trans-Baikal Military District | 1 tactical air army | 1 Scud brigade 1 Scale-board brigade | * 1 heavy artillery brigade 1 multiple rocket launcher regiment | 1 SA-4 brigade | 1 signal brigade | | 1 ECM battalion | 1 ponton bridge regiment 1 engineer regiment 1 assault crossing regiment | 1+ chemical defense brigade | Motor transport reserves in depots. 1 pipeline battalion identified. |
| Central Asian Military District | 1 tactical air army | 1 Scud brigade 1 Scale-board brigade | * 1 heavy artillery brigade 1 multiple rocket launcher regiment (forming?) | 1 SA-4 brigade 2 SA-2 regiments 1 AAA regiment | 1 signal brigade | 1 Comint battalion 1 radar intercept regiment 1 early warning regiment | 1 ECM battalion | 1 ponton bridge regiment 1 engineer regiment 1 assault crossing regiment | 1+ chemical defense brigade | Motor transport reserves in depots. No pipeline units identified. |

* There are a total of five artillery divisions in the Far East Military District, four of which are assumed to be assigned to the combined-arms armies formed or forming in the district. There are two 90-tube divisions in both the Trans-Baikal and Central Asian Military Districts. If at least two armies were formed in the latter two districts, and an artillery division were assigned to each, immediately available front-level artillery support would be furnished by the heavy artillery brigade and the multiple rocket launcher regiment.

TOP SECRET

TOP SECRET
88

The Current Force

The Front

The number and types of front-level combat and service support elements that would be available in the event of an outbreak of hostilities in central Europe or on the Sino-Soviet border are indicated in Table 2. Some differences in support availability may be more apparent than real because of variations in available intelligence on the two areas and the differences in degree of readiness between units in East Germany and those along the border.

The tactical air army, the missile brigades, and the artillery division provide the front commander with significant assets with which to influence the course of either the conventional or the nuclear battle.

In addition, the front is in the process of being further strengthened with heavy artillery. A heavy artillery brigade consisting of a 203mm howitzer regiment and a 240mm mortar regiment is now located in each of the following military districts: Far East, Trans-Baikal, Central Asian, North Caucasus, Odessa, Carpathian, and Belorussian.

The resurrection of the venerable 203mm howitzer, which entered production in 1931, has raised speculation over its intended use. It can fire a 98.8-kilogram HE round over 19 kilometers and could also fire a nuclear round.

The 240mm mortar can fire a 100-kilogram HE round over 9 kilometers. It is considered to be highly effective against antitank weapons and may also be intended to fire chemical rounds. Soviet doctrine classifies both nuclear and chemical rounds as weapons of mass destruction. Military writings imply that a decision to use one of these weapons would include use of the other. Combining these heavy weapons with the Scud brigade provides additional assets to the front commander for either conventional or nuclear warfare.

Other chemical support and combat service support units have remained generally the same as to type, but

their capabilities have been increased as they have received new and improved equipment.

Tank and Combined-Arms Armies

The army is a most crucial echelon in the Soviet ground forces. To emphasize its importance an army is referred to in Soviet military parlance as an *obyyedineniye*, the same term used for a front. Army missions are considered to be operational; corps and division missions are tactical. An army or front commander is a *komanduyushchiy*; a lower commander is a *komandir*. Each of these terms in Soviet usage connotes a significant difference in the authority and responsibility of the army commander and his units.

There continue to be two types of armies--the tank and the combined-arms. The former consists of three or more tank divisions and perhaps a motorized rifle division and the latter consists mainly of motorized rifle divisions.

The Group of Soviet Forces in Germany (GSFG) provides some examples of possible wartime army organizations (see Table 3). These organizations must be viewed with caution, however, because the armies in East Germany are organized in peacetime to be prepared to meet a sudden thrust from the West [redacted]

[redacted] If given time to organize for combat, the inherent flexibility of the command and control structure could permit considerable change in the composition of the five available armies. Tank armies, in particular, could be organized consisting solely of tank divisions, in accordance with Soviet ideas on tank army structure of the early sixties.

There has been no apparent change in the Soviet concept of the tank army and its role as an exploitation force. Tank army operations, as the Soviets see them, will involve moving through gaps and breaches in enemy defenses, fighting fast-moving meeting engagements, and continuing on to front objectives. On

Table 3

Army Organization,
Group of Soviet Forces in Germany
(Major combat and combat support units)

| <u>Subordinate units</u> | <u>1st Guards*</u> <u>Tank Army</u> | <u>2d Guards</u> <u>Tank Army</u> | <u>3d Shock*</u> <u>Army</u> | <u>8th Guards</u> <u>Army</u> | <u>20th Guards</u> <u>Army</u> |
|-----------------------------------|----------------------------------------|--------------------------------------|---------------------------------|----------------------------------|-----------------------------------|
| Motorized rifle division | 1 | 2 | 1 | 3 | 3 |
| Tank division | 4 | 2 | 3 | 1 | 0 |
| Scud brigade | 1 | 1 | 1 | 1 | 1 |
| Heavy tank/assault gun regiment | 0 | 1 | 1-2 | 1-2 | 0 |
| Long-range reconnaissance company | ? | 1 | ? | ? | ? |
| Artillery regiment | 0 | 0 | 1 | 1 | 1 |
| Antitank gun battalion | 0 | 0 | 1 | 0 | 0 |
| SAM regiment (SA-2) | 1 | 0 | 0 | 1 | 1 |
| SAM brigade (SA-4) | 1 | 1 | 1 | 1 | 1 |
| AAA regiment (57mm gun) | 0 | 0 | 1 | 0 | 0 |
| Ponton bridge regiment | 1 | 1 | 1 | 1 | 1 |
| Assault crossing battalion | 1 | 1 | 1 | ? | ? |
| Engineer regiment | 0 | 0 | 1 | 1 | 1 |
| Chemical battalion | 1 | 1 | 1 | 1 | 1 |
| Signal regiment | 1 | 1 | 1 | 1 | 1 |
| Radio-intercept battalion | 1 | 1 | 1 | 1 | 1 |
| Radar-intercept battalion | 1 | 1 | 1 | 1 | 1 |
| Early warning battalion | 1 | 1 | 1 | 1 | 1 |
| Motor transport regiment | 1 | 1 | 1 | 1 | 1 |

* The terms "shock" and "guards" used in unit designations are honorifics established by Stalin during World War II. Units were given guards designations as a recognition of particularly meritorious combat service. Units down to separate battalion were so recognized and the officers and men of these units were authorized to wear the guards badge and to include the designation in their rank; for example, Guards Junior Sergeant, Guards Major, etc. The shock designator was given to only five armies during World War II. The designator was established and given to certain armies created in late 1941 in the rear areas. It was apparently intended for psychological effect and there is no evidence that the armies were specially equipped.

reaching initial army objectives, long-range fire support, if needed, will be furnished by tactical and operational rockets and Frontal Aviation. Towed medium and heavy artillery, found in the separate army artillery units, may have been considered too cumbersome and vulnerable for this type of operation.

In [redacted] [redacted] writings, the combined-arms army continues to play the workhorse role: creating large gaps for the tank army to exploit, advancing over terrain considered unfavorable for tank operations, and cleaning up bypassed pockets of resistance. During the conventional phase of operations, the artillery regiment of the army--particularly in an army making a breakthrough of deployed defenses --is often reinforced by front artillery. Additional engineer, signal, and logistic support will also be furnished if required.

Tank Units

Soviet commitment to the tank and to tank units has been constant. Improvements in the antitank defenses of potential opponents have not been countered at the expense of the homogeneity of Soviet tank regiments and battalions. In the case of tank regiments (see chart, page 27) additional units have been added (reconnaissance, engineer, signal, and chemical defense elements) to ensure the regiment's mobility and maneuverability.

Some tank regiments in the GSFG and the Southern Group of Forces have recently been observed with 10 BMPs, which may indicate the presence of an organic motorized rifle company. Although it is not clear at present, this company may have been taken from the motorized rifle regiment. The functions of these units have not been defined, but there are preliminary indications that the units will furnish troops to regulate traffic and provide headquarters security.

The major changes in the tank division have been the addition of a nuclear capability by the introduction of a FROG battalion in 1963-64, the increases of artillery which began to be observed in 1967, and improvements in support and service capabilities since

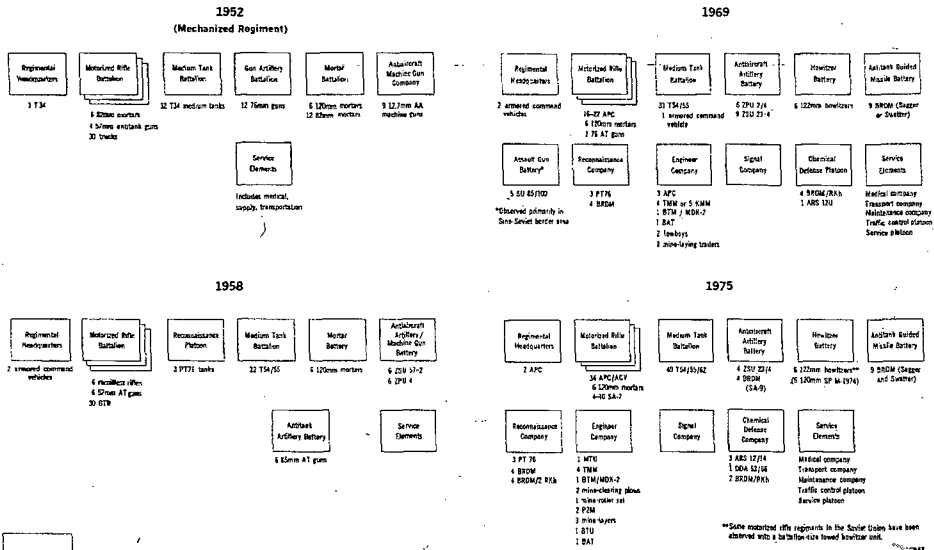
tank, antiaircraft, and field artillery with engineer, signal, chemical warfare, and logistic support (*chart at right*). The combat potential of motorized rifle regiments will vary significantly depending on Soviet policy for issuing the BMP to units. Those regiments that receive the BMP would appear to enjoy a significant edge in firepower and mobility over those equipped with older personnel carriers.

Unlike the tank regiment, the motorized rifle regiment has a broad spectrum of tactical weapon systems and vehicles that provide balanced offensive and defensive capabilities against threats from the ground and the air. In practice, motorized rifle regiments may be reinforced with tank battalions from either the divisional tank regiment or the independent tank battalion. They may also be reinforced with additional artillery, engineer, and signal support, depending on the regimental mission.

The heterogeneous collection of weapons systems and equipment in the regiment presents a challenging training problem. In combat, the adequacy of training will determine the regimental commander's ability to control his dispersed elements and to ensure their resupply of fuel and ammunition. While it appears to provide an assortment of tools for either the nuclear or the conventional battlefield, the regimental organization has never been tested in actual combat and could prove too cumbersome to handle.

Motorized rifle divisions, particularly those making the main effort of an army, may be reinforced with army artillery, a tank battalion or regiment from the army's independent tank regiment(s), and additional engineer support, depending on the anticipated opposition and the obstacles to be overcome. Like the tank division, the motorized rifle division appears to have been originally designed to be organized for combat into three reinforced regimental task forces based on the three motorized rifle regiments. The tank regiment could be used either to reinforce the motorized rifle regiments--by placing its headquarters on reserve--or to form a division second echelon with the mission of exploiting any successes achieved by the motorized rifle regiments.

EVOLUTION OF THE SOVIET MOTORIZED RIFLE REGIMENT, 1952-75



Page# 46

Blank Page or Missing from Archival Copy

How the independent tank battalion will be employed tactically is not clear. It could serve as the division commander's mobile tank reserve and be used to replace tank losses as they occur, or it could reinforce the motorized rifle regiments while the tank regiment is retained intact for the exploitation role. It has also been suggested that this unit might be the separate tank destroyer battalion that is frequently mentioned [redacted]

Non-Divisional Artillery

The doctrinal change which recognizes the possibility that a war in Europe may commence with an indeterminate nonnuclear phase appears to have reopened the issue of increases in non-divisional artillery. Up until at least 1970, however, artillery advocates were told to meet their requirements for increased conventional artillery by more efficient use of available weapons, including rockets supplemented by the firepower of aircraft, tanks, combat vehicles, and infantry. During this same period Soviet writings also indicated there were no medium- or long-range artillery pieces under development.

Recent developments in the GSFG may clarify changes in non-divisional artillery organization and strength. Previously it was thought that each of the armies in East Germany had an independent artillery brigade of 36 tubes. Recently three of these brigades were found to be 54-tube regiments. There have also been reports of a 72-tube regiment subordinate to the 34th Artillery Division--the front-level artillery command that was thought to consist of three or four 54-tube artillery brigades. These reports indicate the addition of an 18-tube battalion to existing units but do little to clarify the current status of the independent artillery brigade. In the past, Soviet writings have credited the non-divisional brigade with 72 tubes and certain logistic and support units not present in the regiment. The redesignation of some brigades as regiments would indicate that there had been a reorganization or realignment of the support elements of these units.

There is also evidence [redacted] that more independent antitank artillery and multiple

rocket launcher units have been employed than are believed to be present in East Germany. These reports may indicate increases in non-divisional conventional artillery support.

It is also possible that as the 152mm self-propelled artillery weapon replaces the towed 152mm howitzer in the motorized rifle divisions, the towed piece will be used to form additional non-divisional artillery units. The 152mm self-propelled weapon is also being issued to tank divisions, apparently as a replacement for one battalion of 122mm howitzers. It has also been seen in the 34th Artillery Division.

On the Sino-Soviet border as well as in the western and central military districts of the Soviet Union, changes in the status of non-divisional artillery may have occurred even earlier than in the forward area. Some independent artillery brigades or divisions, for example, have more than the required number of guns, howitzers, and prime movers but have shortages of personnel, headquarters, and technical support elements. Multiple rocket launcher regiments, possibly assigned to the military district (front) headquarters, have appeared in the Far East and Trans-Baikal Military Districts and possibly in the group of Soviet forces in East Germany.

The overall impression is that the tank and combined-arms army commander in Central Europe will not have under his direct control the inventory of long-range artillery, rockets, and heavy mortars that the army commander was estimated to have at his disposal in the late 1950s. Today's army commander can influence the course of the battle primarily by requests for tactical air support to the front commander and by assigning targets to the Scud brigade and the army artillery regiment. The Scud, although principally a nuclear weapon, does have a bomblet-type conventional warhead. However, it is questionable whether the Soviets would use it in this mode during a European conflict where nuclear weapons might be used at any time. The bulk of Soviet conventional artillery has been moved into the regiments and divisions in conformance with a tactical and operational doctrine that anticipates operations on widely separated axes of advance by self-contained tank and combined-arms forces.

A Universal Division, Army?

The additional tanks and artillery and the advent of the BMP may spark a revival among Soviet planners of arguments heard in the early 1960s for the development of a universal division and a universal army. The BMP, a full-track vehicle, can support the tank in most combat conditions and, because it is lighter, can traverse some terrain that a tank cannot. With its wire-guided antitank missile and 73mm smoothbore gun with automatic loader, the BMP can either supplement the firepower of tank weapons or substitute for them in areas unsuitable for tanks. The BMP's eight-man infantry squad has some protection from nuclear effects, artillery airbursts, and small arms fire. Innovators could cite reports from Soviet observers of the ground combat experience of the 1973 Middle East war as a new argument for more balanced formations of tanks, mechanized infantry, and artillery to replace the tank army and tank division. To achieve a better balance, however, the trends in Soviet organizations observed before October 1973 will have to be modified. Prior to the addition of tanks to the motorized rifle division, the ratio of medium tank to infantryman was approximately 1:22; after the addition the ratio was approximately 1:15. In the tank division the current ratio is approximately 1:4. Convergence, if it is in fact occurring, is in the direction of tank-heavy divisions.

If arguments are presented for more balanced forces, it can be predicted that, as in the early 1960s, they will be answered by traditionalists who will rehearse the Malinovskiy arguments of 1961 and recall the faulty organizational decisions on tank units made in 1938 and 1939 based on conclusions drawn from the Spanish Civil War. In addition, proponents of change will face the practical arguments that the Soviet army already has a sizable investment in tanks and tank production facilities, and that the current inventory of BMPs and the current production rate are not capable of filling the requirements of a major organizational change. A reordering of tank and BMP production rates would be a possibility, but such a move would be opposed by both tank advocates and tank production specialists who have recently converted to T-72 series production.

Summary and Conclusions

Organizational development of Soviet ground force units is controlled by the Main Organization and Mobilization Directorate of the General Staff. This directorate, in close coordination with the Main Operations Directorate, attempts to balance the requirements of doctrine with the availability of men, weapons, and equipment to create organizations capable of performing a given military mission. This process is strongly influenced by a desire to retain a high degree of stability in the organizational structure, as well as by continuous assessment of the forces of potential enemies. In general, Soviet ground force organizations have retained a remarkable continuity over a period of almost twenty years, despite modifications in tactical doctrine and assimilation of new equipment. To a large extent improvements in the forces of probable adversaries have been met by the expansion of existing organization and the introduction of improved equipment.

The personnel strength of the Soviet ground forces, however, has varied considerably over the period: decreasing in the late 1950s and early 1960s as the number of units were reduced and organizations contracted, and increasing since 1965 as units have been added, organizations have been expanded, or higher strength levels have been authorized.

The first organizations developed specifically for the nuclear battlefield appeared in 1956 and 1957. These retained traditional organizational forms but were designed to meet the requirements of the military doctrine of the Krushchev period which anticipated that any war between NATO and the Warsaw Pact would either begin with a massive nuclear exchange or would rapidly escalate to general nuclear war. The utility of ground forces in such a war was questioned and their budgets were limited. Although subjected to intense criticism during an officially sponsored debate of 1960-61, the organizations remained virtually unchanged in form until the late sixties.

In the mid-1960s, Soviet doctrine was modified to accept the possibility that a war between the

Warsaw Pact and NATO would begin with a nonnuclear phase of indeterminate, but probably short, duration. The reflection of this modification in Soviet ground combat organization became evident in the mid-1960s. Beginning in 1966, increases were observed in the division artillery with an accompanying increase in the capacity and number of ammunition supply trucks. Increases also began to be seen in the number of tanks in the motorized rifle divisions. Improved weapons and equipment continued to be introduced to the ground field force as they became available.

During the same period, Khrushchev's successors authorized a ground force buildup to meet problems on the Sino-Soviet border and, later, the requirement to station forces in Czechoslovakia. The result has been an overall increase in ground force manpower.

The organizational structure now appears better equipped to meet the operational parameters established for the 1956-57 units, while accommodating the requirements of a possible conventional war phase.

With regard to the organizations of specific arms and services the following conclusions emerge:

- The Soviets are displaying continued confidence in the utility of tank formations to perform in either a nuclear or a conventional environment. Significant improvements have also been made in the capabilities of motorized rifle units to operate in either environment.
- The weight of conventional artillery support is now located forward in the divisions. Army and front artillery has been strengthened at a relatively slow pace.
- Continued concern has been evidenced over the organization and equipment of command posts at all levels.
- Parallel efforts have resulted in improved antiaircraft defense in the field forces, improved cross-country mobility including the ability to cross streams and gaps,

enhanced capabilities for chemical defense, and better field maintenance support.

As new equipment has been introduced, there have been no indications that the conservative approach to force planning that characterized the past two decades has changed. Principles that guided organizational development in the past continue to be observed. Centralized control over all organizational changes continues to be exercised by the Organization and Mobilization Directorate of the General Staff--a bureaucratic factor which in itself probably inhibits rapid change. Structural modifications continue to be based on assessments of potential enemy forces, changes or modifications in tactical and operational doctrine, receipt of new weapons and equipment, and the geographic characteristics of the theater of operations.

Of these principles, that of assessing the forces of potential enemies is the most dynamic. Further improvements in either the NATO or the Chinese force posture can be expected to be countered by incremental improvements in the Soviet force structure.

Further doctrinal modifications, such as the acceptance of the possibility of limited or theater nuclear war, probably would have relatively little effect on the tactical organizations of the Soviet ground forces because they are already being developed to operate in either a nonnuclear or a nuclear environment. At the army and front level, increases in the number, range, and accuracy of operational nuclear weapons could be expected as well as improvements in real-time target acquisition and damage assessment capabilities. Such improvements probably will occur in any case, and they can conceivably be accommodated within existing organizational structures.

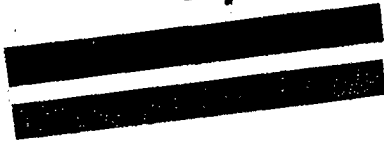
If Soviet military doctrine accepts the possibility of conflict in which nuclear weapons use is limited to the battlefield, an accurate, low-yield battlefield nuclear capability such as that which could be furnished by nuclear artillery would be necessary. Recent evidence indicates that the Soviets either have or expect to have nuclear artillery rounds for artillery (probably 152mm) at the division level. The

receipt of such a round would have little impact on existing organizations.

Whatever the course of future Soviet doctrine on the possible direction of future war, Soviet force planners will continue to seek improved methods of command and control. It is unlikely that noticeable changes will occur in basic staff organizations as a result. Improvements in data transmittal systems and field communications could, however, lead to changes in personnel strength, to realignment of staff functions, and to new patterns of field deployment. At some point these improvements might permit the elimination of a command echelon--such as the battalion--from the current command structure.

New equipment will continue to be introduced into the ground forces at rates determined by assessments of potential enemy forces and resource limitations. Institutional biases within the ground forces--such as those favoring tanks--and the well-entrenched defense industries will continue to have a strong influence on the types and rates of arms production. Because the force is so large, new equipment is introduced slowly, so that the force seems to be constantly changing. Thus it will continue to be misleading to calculate the size and effectiveness of Soviet ground forces on the assumption that ultimately all units of a certain type will be equipped identically.

~~Top Secret~~



~~Top Secret~~