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MEMORANDUM FOR: The Director of Central Intelligence

SUBJECT : MILITARY THOUGHT (USSR): Some Questions of Operational Art and Military Science Work

1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". This article reviews the major theoretical principles and practical recommendations contained in certain theoretical works prepared by military personnel in 1962. These include questions of combat readiness and mobilization readiness, long-distance regrouping of troops, meeting engagements, and ways of increasing the rate of advance. The author enlarges upon some of these topics, stressing the use of nuclear weapons as a means of achieving a high rate of advance, and deals with the use of landing operations in a future war and the control of air defense forces and means. This article appeared in Issue No. 3 (70) for 1963. [redacted]

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2. Because the source of this report is extremely sensitive, this document should be handled on a strict need-to-know basis within recipient agencies. For ease of reference, reports from this publication have been assigned [redacted]

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William E. Nelson
Deputy Director for Operations

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Summary:

The following report is a translation from Russian of an article which appeared in Issue No. 3 (70) for 1963 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". The author of this article is Colonel V. Zemskov. This article reviews the major theoretical principles and practical recommendations contained in certain theoretical works prepared by military personnel in 1962. These include questions of combat readiness and mobilization readiness, long-distance regrouping of troops, meeting engagements, and ways of increasing the rate of advance. The author enlarges upon some of these topics, stressing the use of nuclear weapons as a means of achieving a high rate of advance, and deals with the use of landing operations in a future war and the control of air defense forces and means.

End of Summary

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The SECRET version of Military Thought was published three times annually and was distributed down to the level of division commander. It reportedly ceased publication at the end of 1970. [redacted]

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Some Questions of Operational Art and Military Science Work

by

Colonel V. Zemskov

The military science works of military districts and groups of forces are very important to the solution of complex problems of military art. Based on the experience of operational command-staff, troop, and special exercises, they are essentially collective works, and contain theoretical conclusions and practical recommendations on many extremely important questions of a modern operation and battle.

The fact that a wide circle of command personnel take part in research and development work with respect to questions of military theory emphasizes its great importance in increasing the combat effectiveness and combat readiness of the troops. "The effort to master the principles of military science," said the Minister of Defense, "constitutes important evidence of the vitality of the army and of its uninterrupted development and growth. Unfettered by dogmatism, military science is becoming accessible to all who wish to understand and master it. The surest way to increase the combat effectiveness of the army is to increase the military-theoretical training of personnel, particularly if this training is built on the granite foundation of Marxism and Leninism."*

This principle has been completely verified by practice. In 1962 more than 30 papers were written by generals and officers of the ground forces. In them a rather thorough study was made of the theoretical and practical problems of conducting operations in the initial period of a war at high rates of advance and to a great depth, the use of rocket troops in front and army operations, methods of bringing troops rapidly to combat readiness, troop control methods with the use of means of automation and mechanization, and questions of the use of the branch arms.

Of particular interest are such works as "The Movement Forward of Front (Army) Troops over Great Distances and Their Commitment to an Engagement from the March for the Purpose of Developing an Offensive Operation during the Initial Period of a War", "A Meeting Engagement of Large Groupings of Front (Army) Troops during Their Commitment to an Engagement in an Offensive Operation in the Initial Period of a War", "The Transition to the Offensive by Front Troops while Simultaneously Repelling Enemy Strikes and Developing the Operation to the Entire Depth of the

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* R. Ya. Malinovskiy, "Be Vigilant in Guarding the Peace", Military Publishing House, 1962, p. 49.

Theater of Military Operations in the Initial Period of a War", "Ways and Means of Achieving High Rates of Advance by Combined-Arms Large Units", "The Preparation and Conduct of a Front Offensive Operation under the Conditions of Mountainous Terrain", "A Front (Army) Assault Landing Operation in Coordination with Naval Forces, Long Range Aviation, and the Strategic Rocket Forces for the Purpose of Seizing Islands", and others. Officers and generals of a number of military districts simultaneously worked on each of the above subjects. This made it possible to compare the results of the research and to find the optimal solution for the most important problems of operational art and tactics as they apply to the different theaters of military operations and to the different conditions of the possible initiation of a future war.

Let us examine briefly the more important theoretical principles and practical recommendations contained in the military-theoretical works of the military districts (groups of forces) completed in 1962.

The combat readiness and mobilization readiness of the troops. Bringing troops to combat readiness and maintaining their combat effectiveness depend to a great extent on the speed with which they are notified and moved out from their permanent deployment sites. Therefore a notification system that is both effective and simple is needed.

In works by the Group of Soviet Forces, Germany and by the Far East and Siberian military districts, it is emphasized that it is necessary to have unified, predetermined notification signals, containing instructions on the required variant of troop actions, which would be transmitted directly to large units, units, and installations by special signal coding equipment.

In order to avoid excessive losses from enemy means of mass destruction and to create favorable conditions for carrying out mobilization, it is proposed that the problem of the withdrawal of troops, depots, bases, control posts, and other important installations from large cities be solved ahead of time.

An extremely complex task is that of replacing reservists and equipment that have been put out of action before reaching the troops, and entire subunits that have lost their combat effectiveness as a result of enemy nuclear strikes. One way of performing this task, proposed by the Moscow Military District, is to form and attach to the reserve units and large units entire subunits and units with later readiness periods, and to send them to reinforce or replace those that have been put out of action.

In addition, in order to increase the combat readiness of the troops, it is recommended that reconnaissance subunits and air defense and communications units be kept at full strength even in peacetime.

In order to provide for the technical servicing and repair of motor vehicle-tractor equipment that will come from the national economy during full mobilization, the necessary reserves of repair equipment must be created now.

In a number of works, serious exception is taken to the present accepted procedure for issuing individual radiation and chemical defense means to reservists. For example, gas masks are to be issued in the units only when the conscripts arrive for service. This means that a considerable number of personnel will be without protective means for a long time and, in the event the enemy uses weapons of mass destruction, there will be unwarranted losses. In order to correct this, it is suggested that conscripts be issued protective means at the assembly points.

In this connection, in order to increase mobilization readiness, it is recommended that the staffs of the military districts and the oblast military commissariats maintain continuous contact with civil defense organs and local authorities on questions relating to the use of persons of conscription age and to the use of motor vehicle-tractor transport and other equipment. The problems of the organization of a unified notification system on the radiation, chemical, and bacteriological situation must be solved in advance, and the procedure for calling out troops to conduct radiation reconnaissance, strengthening the guarding of quarantined areas, and for carrying out urgent emergency rescue work must be determined.

It should be noted that the problems of the organization and conduct of mobilization expansion require further comprehensive study, and both the individual component parts of measures and the entire complex of measures require practical testing in order to simplify them and significantly reduce the period of time required for full mobilization of troops.

Some questions of the regrouping of troops over great distances. The problem of regrouping troops over great distances has been studied and continues to be studied very carefully in the troops. Special operational exercises, command-staff war games, and military science conferences and meetings have been held in a large number of districts. Study and generalization of the military science works of the Kiev, Moscow, North

Caucasus, Carpathian, Volga, and Belorussian military districts enables us to draw the following preliminary conclusions.

If the regrouping of troops over great distances is initiated during a definite period of threat and there is reason to believe that it will be completed after the war has begun, for today, while the troops are not adequately equipped with large-capacity vehicles, it would be best to accomplish the regrouping using the combined method. In doing so, the bulk of the troops must move using their organic means, and heavy equipment may be shipped on large-capacity vehicles or by rail transport.

This method ensures that the troops move at a sufficiently high rate and makes it possible, when necessary, to initiate combat actions during the regrouping. By using their organic transport, the troops can more easily negotiate contaminated zones and zones of destruction, employing for this purpose all of the existing axial and lateral road network. The shipment of tanks and other heavy equipment by rail makes it possible to conserve the mileage reserve remaining to the next routine overhaul and to save the tracks and suspension of the vehicles.

The new large-capacity vehicles capable of speeds up to 30 kilometers per hour should be used primarily to transport rocket troops, engineer road construction units, and assault crossing units. If they select routes with hard-surface roads, they can successfully complete a long march not only at the same rate of movement as the main front (army) forces but even faster if necessary. If there are enough large-capacity vehicles, it is advisable to transport tanks on them as well. Of course, this does not mean that tanks cannot move on their own if they have a sufficient mileage reserve remaining to the next routine overhaul and provision has been made for the replacement of their tracks during the march.

In this connection, in the works of a number of military districts and in research of the Military Academy of the Armored Troops, serious consideration is given to increasing the mileage reserve of tanks by developing tracks of new designs with a longer service life. At the present time, a tank stops for technical reasons four to six times during each 1,000-kilometer run. In addition, the operational reliability of the different tank components is not identical. For example, the mileage reserve of tank tracks is 2,000 kilometers, while that of the engine is 9,000 kilometers. Consequently, the tracks must be replaced three to four times before the engine is replaced. Of course this adversely affects the capabilities of the large units and formations to accomplish marches over great distances and then engage in combat actions at high rates and to a

great depth.

This problem should be solved not only by setting up reserves of tracks on the routes of advance of the tank units and large units, but primarily by developing a track of a new design, with a service life equal to the mileage reserve of the tank engine.

Air transport may be used to airlift individual units as reinforcement for the forward operating troops or to negotiate large areas of destruction and contaminated zones, and also to transport missiles, nuclear warheads, special fuel, and different types of cargo.

River transport will be used primarily to organize transshipment bases on large rivers, and troop and cargo crossings when bridge crossings have been put out of operation.

It is recommended that the troops be moved forward through zones which have at least two main routes and one reserve route for each division. This provides better conditions for maneuvering and bypassing destroyed and contaminated sectors without impeding the movement of other army troops. In addition, the divisions should indicate the axis of movement from their zone in order to avoid commingling of troops when they leave or bypass contaminated terrain.

In organizing a regrouping, an effort must be made to maintain to the fullest possible extent the integrity of large units and units and their continuing combat readiness during the march. For this purpose, it is recommended that the routes selected for the movement of troops using organic transport be, if possible, in immediate proximity to the railroad lines over which their heavy equipment is being shipped; this will make it possible to unload the equipment if necessary and integrate it into the units and large units making the march using their organic transport.

Under modern conditions, it is of great importance to plan measures to ensure that the march continues in an organized manner in the event the enemy delivers strikes using nuclear or chemical weapons during the march. For this purpose it is suggested that the areas of possible enemy strikes be determined ahead of time and that variants of change in the procedure of movement of the troops moving by rail and by organic transport, be planned. This obviously requires that two schedules for troop movement by rail be drawn up. One would be the normal schedule while the other would allow for bypasses due to the destruction of rail junctions and bridges and provide for the concentration of repair means, materiel, and spare parts for

restoring bypasses and laying crossings.

During a troop movement over a great distance, the most acute problem of rear support is fuel supply. The following is a possible solution. If there are rail lines in the regrouping zone, it is advisable to move fuel reserves by rail at the beginning of the march in order to create temporary depots at stations near lateral routes; large units and units could obtain fuel from these depots and bring it up using their own transport. As for army fuel transport battalions, their use should be centralized: the amount of fuel needed for a day's march should be sent forward to stationary or temporary depots for distribution to the troops at the day's halt.

It is recommended that the control of large units on a march, prior to the beginning of military actions, be carried out through the staff, without deploying command posts, and also by means of small operations groups and individual representatives assigned to monitor the loading, unloading, and movement of troops in the more remote and difficult movement sectors. The premature deployment of control posts (command posts, forward command posts) and the simultaneous creation of different operations groups lead only to the dispersal of forces and means.

As regards the order of troop movement forward during a regrouping, it is recommended that the covering units and the operations groups of the field headquarters of the front and armies, with their communications means, be the first to move, followed by the forces needed to reconnoiter and prepare the routes and the assembly area, and several surface-to-air missile units to protect the troops from enemy strikes in the vulnerable sectors of the routes (rivers, mountain defiles, etc.). The ground subunits of the air army and the radiotechnical units should move out after these units. Only then should the main forces be sent forward. In a number of cases it is desirable to move the rocket units and large units prior to the troops of the first echelon, under cover of specially assigned forces and using all available routes in the zone of the army (front).

The concentration areas and troop offloading areas at the end of the movement forward should be designated at points 150 to 300 kilometers from the front line. This will make it possible to protect the troops to a certain extent against enemy strikes using operational-tactical nuclear means and at the same time will ensure the organized commitment of the troops to the engagement in the event of a sudden breakthrough by large enemy forces on the axis of the disposition of our troops.

Meeting engagements of large troop groupings. A future war will be characterized by the wide use of powerful means of destruction and the effort of the belligerents to carry out the assigned tasks primarily by means of an offensive. Because of this there will be a sharp increase in the relative importance, role, and significance of meeting engagements. The distinguishing feature of meeting engagements will be the variety of the combat actions of the troops participating in them. The majority of them will engage in offensive actions while the others will carry out a march, repel enemy strikes, or withdraw.

The conditions under which meeting engagements between large groupings of troops will occur in the initial period of a war will depend on the specific operational-strategic situation.

Meeting engagements may occur both at the beginning of a war in the immediate border zone, when both sides go over to the offensive following the first nuclear strikes, and during the war. The troops of the first operational echelon will usually take part in the engagements of the initial period of a war. As the meeting engagement develops, fairly large forces that have been moved up from the depth may be drawn into it. During combat actions, after the front troops have been moved up from the depth, they may be committed to the engagement either to develop the offensive of the forward operating groupings of troops or to destroy attacking enemy troops. In both cases, the front troops will have to conduct meeting engagements using all their forces or a portion of them. Because of this, in a number of works the conclusion is drawn that not only individual large units and armies will conduct meeting engagements, but also entire fronts, brought into the engagement from the depth.

Obviously, a meeting engagement cannot be conducted on the scale of a front with the linear deployment of troops on a given line or in one area. Usually several independent meeting engagements will take place on different axes, and they may be conducted either simultaneously or consecutively.

Because the firepower of the belligerents has increased in comparison with past wars, the duration of meeting engagements will be significantly reduced and will fluctuate within the limits of one to two days. However, after completing one meeting engagement, the armies (front) will be forced to begin new ones; as a result, the operation, particularly in its initial stage of development, may consist of an uninterrupted series of meeting engagements between opposing groupings.

The basis of maneuver in the modern meeting engagement is the maneuver with the fire of nuclear weapons. Operational formations will most often use a flank attack and, less often, a frontal attack. Under modern conditions, the delivery of frontal attacks is advisable only if the main enemy grouping has been effectively destroyed by nuclear weapons, if the opportunities for maneuvering the troops for the purpose of delivering an attack against the flank and rear are limited, or when the grouping of forces and means of the front (army) that was formed at the beginning of the engagement makes a frontal attack necessary. A frontal attack in a meeting engagement is an emergency form of action and is less than advantageous. It condemns the attacking troops to the conduct of exhausting, prolonged combat actions.

It is to be supposed that the main forces of the enemy will rarely be located directly opposite the front and to the center of its operational disposition. Most often they will be closer to one of the flanks. Consequently, this inevitably makes it necessary to deliver not a frontal but a flank attack following the delivery of a massed nuclear strike against the enemy.

An effective flank attack can be delivered provided that the area of the forthcoming meeting engagement has been correctly determined, a grouping of our troops has been formed during their advance, the troops of the first echelon engage in aggressive actions, zones of radioactive contamination of the terrain and areas of destruction have been formed, etc. In a number of cases these conditions can be achieved beforehand by means of nuclear strikes against the enemy troops covering the flank of his attack grouping.

The depth of flank (enveloping) attacks may vary depending on the composition of the operating enemy grouping and the depth of its operational disposition (battle disposition).

Deep attacks that penetrate to the rear of the enemy may be warranted in those cases when the encirclement of the entire enemy grouping is planned. In other cases the attack should be planned to a depth that ensures its delivery directly against the flank of the main enemy grouping.

On the whole, the depth of the enveloping attack should, as a rule, correspond to the depth of the disposition of the enemy grouping that is to be destroyed. Thus, when combating an enemy division, the depth of the flank attack (from the area of the commitment to the engagement) should amount to about 25 to 30 kilometers and when combating an army corps -- 50

to 70 kilometers.

Since the troops will most often enter into the engagement as they approach the area of combat actions in different dispositions (march, approach march, and battle dispositions), most of the works indicate that it is advisable that not lines but areas of deployment for the commitment to the engagement be designated for the armies and divisions.

In investigating questions of the operational disposition of troops, a number of works (from the Belorussian, Carpathian, Odessa, and other military districts) proceed from the entirely correct assumption that the strength of a front (army), before the commitment to the engagement from the march and after moving over a great distance, will be, as a rule, minimal, since the different periods for full mobilization of troops, the extreme effort to gain time and seize the initiative, and the tense situation characteristic of the initial period of a war will force the commitment of the troops to the engagement without waiting for the complete concentration of all forces. As a result, the front may engage in a meeting engagement considerably more often with the forces of one army and one to two large units, possibly even when the enemy has superior strength. This will be its first echelon. The large units which comprise the second echelon will, at the time of the initiation of the meeting engagement, be in the process of regrouping.

Thus, the operational disposition of a front (army) in a meeting engagement will be, as a rule, two-echelon.

However, under all circumstances an effort should be made to have the majority of troops in the first operational echelon in order to maximally exploit the results of nuclear strikes against the enemy and to complete the destruction of his troops by means of swift actions along axes. The operational-tactical groupings that deliver powerful attacks on the main axis must include tank large units.

Airborne landing forces and sabotage groups will become of great importance in a meeting engagement. Under conditions when the development of combat actions is in the form of scattered centers of fighting, dropping them in the rear of the enemy should acquire extensive operational importance and become one of the forms of operational maneuver. In this way the greatest degree of synchronization of actions against the enemy throughout the entire depth of his operational disposition will be achieved.

Ways of increasing the rate of advance. Under modern conditions, it has become objectively necessary to achieve a high rate of advance; to a considerable extent this predetermines the success of the operation and the battle.

The experience of exercises and theoretical studies demonstrates that the most important ways of achieving a high rate of advance are: to gain and maintain constant fire superiority over the enemy; to use nuclear and chemical weapons effectively and have the troops promptly exploit the results of nuclear and chemical strikes; to organize continuous combat against enemy nuclear means of attack; to quickly restore the combat effectiveness of subunits and units that have been subjected to nuclear strikes; to have forceful, aggressive actions with constant retention of the initiative and to inflict our will on the enemy; to skilfully and quickly exploit breakthroughs and breaches in enemy battle dispositions so as to deliver attacks against the flank and rear of his grouping; to advance rapidly by day and by night; to build up forces on the decisive axis by delivering nuclear strikes, maneuvering troops, and committing the reserves; to make wide use of airborne landing forces and promptly exploit the results of their actions; to precisely organize coordination and the continuous support of it during a battle; to quickly negotiate rivers and zones of radioactive contamination and destruction; to have stable, continuous troop control; and to have aggressive reconnaissance and comprehensive support of combat actions.

Since the above factors have not yet been adequately explored in the military science works of the academies and military districts (groups of forces), we shall dwell on several of them that, in our opinion, are of the greatest interest.

A decisive means of achieving a high rate of advance is to effectively destroy the enemy by using nuclear weapons and other means of neutralization.

The effective exploitation of the results of the use of nuclear weapons constitutes the basis of the success of combat actions and, consequently, of the achievement of a high rate of their conduct. Therefore, as a number of works indicate, in a future war there should be a use for nuclear weapons even during the performance of tasks of close combat. This will result in a considerable increase in firepower at the tactical level and, when combined with the high mobility of the units and large units, will make it possible to increase the rate of the advance.

Consequently, the development of nuclear warheads with a wide range of yields constitutes one of the most important problems. On its solution will depend the solution of other problems of tactics and operational art: the methods of conducting a battle and operation; the organizational structure of subunits, units, and large units; their armament and equipment; and their independence in performing both operational and tactical tasks.

But an increase in the rate of advance is inconceivable unless such problems as combating enemy nuclear means of attack and providing technical support to the rocket troops are successfully solved.

Because of the great nuclear potential of the operational formations and large units of the US Army ground forces (at the present time, an army group may be given 300 or more nuclear warheads per operation, a field army -- up to 180, an army corps -- up to 60, and a division -- up to nine or more; and an army group may have more than 1,500 launchers for their delivery), it is clear that we cannot expect to conduct offensive operations at a high rate and to a great depth unless the nuclear means of attack of the enemy are decisively destroyed.

In the works of a number of military districts and of the Military Artillery Command Academy, it is pointed out that the most important prerequisite to effectively combating enemy nuclear means of attack is the comprehensive and coordinated utilization of all forces and means capable of participating in the battle, operating according to a unified plan. Aviation must play a large role in performing this task. Because of the further growth of the number of enemy missile/nuclear means and their increased mobility, it is suggested that at least 50 percent of the aviation resources of the front be committed for this purpose and that their sphere of operations be located in a zone no closer than 15 to 20 kilometers from the front line, i.e., against enemy operational nuclear means of attack.

The basic means of neutralizing enemy tactical nuclear weapons must be the rocket artillery, which has a considerable firing range: the Grad launcher -- up to 20 kilometers, and the BM-24 -- up to 17 kilometers. Long-range conventional artillery also has rather broad capabilities within its firing area. Therefore, it is suggested that the divisions have one to two battalions of 130mm gun artillery.

The commander and staff of the front (army) must be the main organizers of the combat against enemy nuclear means of attack. Since only

they have full and comprehensive reconnaissance information and are thoroughly informed as to the general operational situation and the resources and capabilities of all front (army) forces and means, and can efficiently plan and effectively direct the combat against enemy missile/nuclear means. No one else is in a position to correctly distribute the tasks involved in the reconnaissance and destruction of these means -- and organize coordination -- among the different executors: the rocket troops and artillery, aviation, chemical weapons, combined-arms large units, tank units, airborne landing forces, and other forces and means.

True, in the research of the Military Artillery Command Academy an attempt is made to demonstrate the necessity of controlling all forces and means committed to the combat against enemy nuclear weapons from one post of the front (army) command posts, similar in type to the air defense command post. At this post should be: the chief of the front (army) rocket troops and artillery or his deputy; the deputy commander of the air army, for control of aviation units assigned to combat enemy nuclear means; and officers from the staff of the rocket troops and artillery, the staff of the front air army, and the intelligence and operations directorates.

In our opinion, it is hardly advisable to base the handling of this problem on the use of a combined (joint) control post. We must work to further improve the equipment used in communications and in troop and fire control, staff equipment, and the means used in the reconnaissance and monitoring of our nuclear strikes so as to be able to process reconnaissance data and exchange information with a minimum expenditure of time, make the best possible decisions for the delivery of strikes against enemy nuclear means in a short period of time, and ensure the performance of the assigned tasks on the basis of the integrated use of all forces and means.

An extremely important factor in increasing the rate of advance, as is pointed out in works of the Belorussian, Carpathian, and Baltic military districts, is the improvement of tank engineering. Basic efforts must be directed toward decreasing the weight of the tank (by replacing the heavy armor plating with light alloys and plastics) without weakening its armor protection, increasing tank speed and range on one fueling, increasing its fire power, and reducing the number of crew members.

An important way of increasing the rate of advance is to use tank subunits and units in the first echelon and motorized rifle units in armored personnel carriers or infantry combat vehicles in the offensive,

making it possible to rapidly and deeply penetrate the enemy position, maneuver on the battlefield, and move quickly along the most favorable axes, utilizing gaps and breaches in enemy battle dispositions. The following operating procedure is suggested: while the troops of the first echelon are engaged in battle, the second echelon or the reserve will continue to advance and will move rapidly forward through breaches and unoccupied sectors of the terrain; large units and units of the first echelon, after destroying the enemy, will withdraw into the second echelon and will move behind the advancing forces, ready to enter into the engagement again. In the opinion of a number of districts, this alternation of operational echelons will make it possible to achieve the necessary pace of combat action throughout the entire depth of the offensive operation.

Of great importance in accomplishing a rapid maneuver is the use of helicopters to transport troops, combat equipment, ammunition, and other materiel from one axis to another, and to negotiate zones of radioactive contamination, zones of destruction, water obstacles, and other obstructions.

It must be particularly stressed that in all works devoted to the given subject the decisive factor in the achievement of a high rate of advance is considered to be the individual soldier. Not even the most modern means of combat, of control, and support or forms of actions can guarantee a high rate of advance. Only an excellent level of combat training of personnel and the ability to make perfect use on the battlefield of the diverse modern combat means, in combination with the high combat morale of the Soviet soldiers, can ensure a high rate of advance on the offensive.

In a future war, front (army) landing operations for the purpose of seizing islands will be widely used and will be of considerably greater importance than before. This stems from the decisive nature of the operations of our armed forces, and from the geographic situation of the Soviet Union and its allies and of the probable enemies. All the continents and the vast expanses of the oceans and seas will be in the zone of combat operations. Therefore, the seizure of the most important islands will be an essential prerequisite to the achievement of the final goal of the armed combat between the most important countries of the hostile coalitions which are separated by an ocean.

The present level of development of the means of armed combat and of combat equipment and the growing fire and striking power of the ground

forces are expanding the capabilities for carrying out landing operations and making it possible to conduct them with smaller forces but more decisive goals.

Landing operations can be successful only if there is a simultaneous, combined landing of amphibious and airborne forces and landing forces transported on submarines, and if extensive use is made of tank units and large units as the main strength of the landing force, since they are able to make assault crossings of water obstacles and capture islands under their own power, and can exploit the results of nuclear strikes better than the other branch arms.

For example, in the North Caucasus Military District it is thought that when troops cross expanses of the sea by means of amphibious armored equipment, a certain amount of surprise is achieved, for then there is no need to concentrate transport and landing means at ports of embarkation. Moreover, the secrecy of the approach to the island is ensured, since the range at which tanks in the water can be detected by radiotechnical means does not exceed seven to ten kilometers. In turn, the technical and combat characteristics of tanks permit them to conduct gun and machinegun fire while they are swimming, to come out on the beach in battle dispositions regardless of whether it is high or low tide and immediately to begin performing their combat task. In addition, when water obstacles are negotiated by tanks, troop combat actions can be transferred from one group of islands to another without a holdup, and there is a sharp decrease in losses of manpower and equipment as compared with losses when they are moved on transports.

In order to transport troops by sea, it is of great importance that existing landing craft be further improved and that new, small, high-speed ones be created so that the landing force troops and equipment can be quickly taken aboard outside the ports and bases, and the landing force and its equipment can be carried across and landed directly on the island within a short period of time.

The landing operation plan of the last war (many months of preparation, the winning of partial sea and air superiority, the lengthy shipment by sea of a landing force consisting of many thousands of persons and their heavy equipment, and the landing of forces many times superior to those of the enemy and the subsequent seizure of the island) is not suitable for use now. It does not ensure an adequate degree of surprise and requires a large number of transport ships and aviation.

In view of this and of the need to simultaneously carry out a considerable number of landing operations at the very beginning of the war with limited transport means, works of the Far East and North Caucasus military districts suggest the following plan for a landing operation for the purpose of seizing islands: gain fire superiority; achieve partial superiority at sea and provide an effective air defense; seize the islands by surprise using limited forces that have been transported by sea and by air and landed on several axes; and then have the landing forces advance along selected axes for the purpose of seizing important areas and gaining control of the entire island.

Depending on the organization and conduct of the landing operation and on the general nature of front (army) actions, it may be directly controlled by the front (army) headquarters or by a specially appointed operations group headed by the deputy commander of the front.

During the period of the preparation and conduct of the landing operation, it is desirable to temporarily include responsible representatives of the navy and the air forces in the complement of the field headquarters of the front, with the status of deputy commanders, and to operationally subordinate them to the commander of the front (army) troops.

The participation in the landing operation of the strategic rocket forces and the forces of the Air Defense of the Country is based on coordination between these branches of the armed forces and the front (army), within the framework of the tasks to be performed by them in accordance with the overall plan of the war and directly in support of the landing force, through the assignment of responsible representatives to the front (army).

Nuclear weapons will play a decisive role in a landing operation. They create conditions favorable to its conduct by destroying missile means, enemy naval and air basing areas, and large enemy control points and troop concentration points. As a rule, the ground forces will complete the destruction of the enemy on the island (islands), and when necessary will occupy them and organize a strong defense.

The control of air defense forces and means. At the present time two branches of the armed forces have active air defense means: the ground forces have ground air defense means and the air forces have fighter aviation. This considerably complicates the organization of coordination between ground air defense means and fighter aviation assigned to air

defense.

To better organize coordination between ground forces air defense means and fighter aviation under the existing authorized organizational structure, it is suggested that they be controlled from the air defense command post of the front (army). The senior officer at this post must be the chief of the front (army) air defense troops, who will consolidate the efforts of the air defense means and organize coordination between the ground forces and fighter aviation. In addition, the chief of the front air defense troops, in conformity with the developing situation and the combat characteristics of each of the means, will allocate efforts by zones of combat actions or will concentrate them in one zone, coordinating their actions with respect to axes, targets, time, and altitudes.

For direct combat control of fighter aviation allocated for air defense, it has been recommended that an operations group headed by a deputy commander of the air army be assigned to the front air defense command post and that a forward command post or a guidance post for division fighter aviation be organized at the air defense command post of the combined-arms (tank) army.

Combining the command posts of the ground air defense means and the fighter aviation makes it possible to centralize control of all air defense means and to organize coordination among them without changing the organic structure of the forces. At the same time, this will substantially increase the maneuver capabilities of the air defense forces on an operational scale and will create conditions for the automation of control processes at the front-army level.

During the current year major, important tasks are being performed in the military science field in research on the urgent problems stemming from operational and combat training requirements. We must complete the working out of such matters as the organization of the conduct of the initial nuclear strike by front means, the movement of troops over great distances, the organization and conduct of the first front (army) offensive operation of the initial period for the purpose of decisively routing enemy groupings within a short period of time, and the ways and means of having the results of the use of missile/nuclear weapons more effectively exploited by the front attack groupings when they are committed to the engagement.

In the sphere of tactics, we are exploring methods of moving divisions out of their permanent disposition sites and concentration areas to the area of combat operations for the purpose of delivering an attack from the

march, the actions to be taken by a motorized rifle division for the purpose of covering a state border in coordination with a border guard detachment, etc.

For the first time, military science organs have been given the important tasks of elaborating on the history of the branch arms, the formations, and the large units and on the problems of the development of the military art of the ground forces during the postwar period, and of studying the most instructive operations of World War II.

The completion of work on these highly varied and interesting military science subjects constitutes a more effective means of increasing troop combat readiness and improving the quality of operational and combat training.