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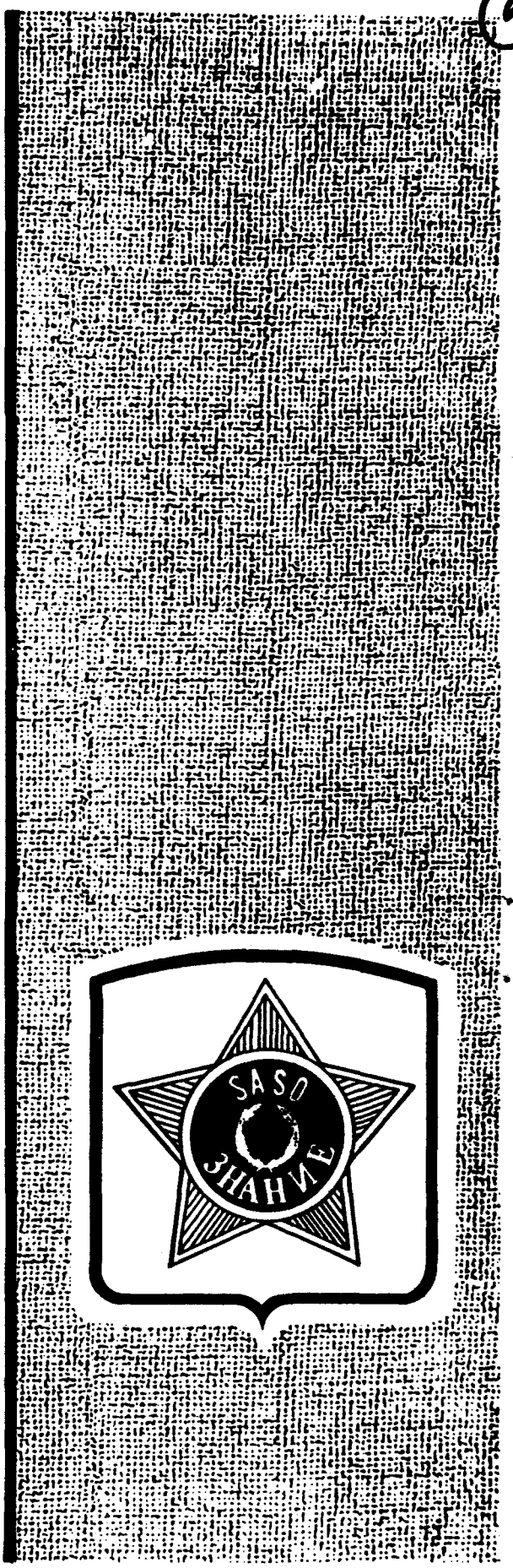

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SELECTED READINGS IN THE HISTORY OF SOVIET OPERATIONAL ART

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May 1, 1990

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STRATEGY IN AN ACADEMIC FORMULATION[1]

N. Varfolomeyev

I.

In the list of academic disciplines which entered into the program formed in 1918 at the Red Academy Of The General Staff, first in order was strategy. Under a somewhat different name, specifically, "Fundamentals of modern strategy," this discipline also occupied first place in the list of sciences taught in accelerated courses at the academy in the first academic year, i.e. 1918/1919.

However, it would be mistaken to conclude from this that dominant significance was attached to strategy at the dawn of academic studies. If one were to take as a criterion only the amount of time allotted for study, then in this case strategy could not brag about the excess of time given to it: out of 625 lecture hours in the academic plan, only 28 were given to strategy, while tactics and strategy together received 196 hours; this meant that the share of the two fundamental and most important military sciences amounted to only 1/3 of the overall time.

Under these conditions, one can speak about a monopoly neither of such a "high" science as strategy, nor of a more utilitarian one, i.e., tactics. Indeed, only in the later period of the academy's existence did tactics and strategy gradually earn a fitting place in the academic plan.

The development of the academic program of strategy proceeded on a winding path. This was conditioned by vacillations in the exact determination of the very purpose of the Military Academy.[2]

With the elimination of *fronts*, there stood before the academy the task of studying the experience of the civil and imperialist wars and reworking it for the use of the Red Army under conditions of forthcoming wars by attentively following contemporary events.

This task, naturally, was to place its imprint on both the content and the method of instruction of these sciences, including strategy. Above all, a broadening of the program commenced. Strongly unbalanced in favor of its theoretical, predominantly operational part, the program in strategy hardly touched upon the very essential issues of materiel support of the operation—the study of the work of the rear. The summer campaign of 1920 against the White Poles, which concluded with our withdrawal from the Vistula to the initial position, obviously demonstrated the importance of correctly structured and well-guided work in the materiel support of success. This stimulated the focus of greater attention on materiel matters, since already in 1921 the "feeding of the active army," where the rear structure and service were examined, was a substantially large component part of the strategy program. However, in this period the strategy cycle of courses strived more for the development in the students of an overall military outlook than for the cultivation of practical skills. Therefore, for a more thorough treatment of a number of issues of practical importance for the army, new sections (rear control, staff work, etc.) were in later years included in the strategy program. In addition to the department for the "study of war," which treated strategic issues, a department for "conduct of operations" was created, which treated issues of operational art. The establishment of this department, the program of which considered various issues connected with work in the all-round support of an operation, played a large role in bringing the strategy cycle of courses closer to the practical requirements of the Red Army.

II.

In the history of teaching strategy, the entire first five years of the academy's existence (1918—1923) can be characterized as a transition period, during which attempts were made to create a specific course. The implementation of this was hindered, however, by a whole series of subjective and objective reasons. In searching for the proper content of this course, the practice of academic teaching, on the one hand attempting to reflect the inquiries of life, and on the other hand being under the influence of the person in charge of the cycle at the given moment, underwent a number of changes.

The accelerated course of 1918 (the first academic year) provided its students in the briefest of accounts with only an overall basic understanding in strategy; there were no details or thorough analysis.

In the next year (1919/1920), the course, in comparison with the previous year, was not distinguished by anything especially new. In addition to "strategy," such sections as "philosophy of war," "naval affairs," and "engineer preparation of the defense of the State" were studied. Studies in all the areas of a single cycle of

lectures essentially were not consolidated, ideologically or organizationally, by overall guidance. As a result there was both ideological and methodological disorder.

The 1920/1921 academic year brought the first changes in both the program and teaching methods. Strictly speaking, the program changes did not relate to the strategy curriculum itself, which remained unchanged; however, "war economy" was introduced into a number of areas which by rights should have been combined in the strategy cycle. Thus, as early as seven years ago the academic program was already acquainted with "war economy." Since then, from year to year, this area, included now in military administration, now in strategy, has appeared in academic plans first as a supplemental (and then a third) academy course. However, until now, including the last (1927/1928) academic year, it could not be acknowledged as fully satisfactory in its development. There are many reasons, the main one being the absence of developed materials; in addition to this, in the attempt to delineate a concrete purpose there was the impossibility of making public many issues closely connected with the defense of the USSR.

As for teaching methods, for the first time, with the formation in 1921 of the supplementary academy curriculum, the course was directed not only along the path of giving lectures, but also along the path of independent work on the part of the student on the so-called "third strategic theme" (later this theme was called "operational"). This nomenclature defined an entire group of work, both operational (combat actions) and administrative (supply). The scale was that of the army or corps.

The overall aim, pursued by the formulation of a strategic theme guiding the entire academic preparation, consisted of establishing, by means of independent student work, how regularly and solidly the theory and practice of troop control were assimilated. The theme fell to three areas: operational, military-administrative, and military-geographic and strategic. To pass the theme, the student made a report to a committee, which analyzed the work that had been done.

In the course of three academic years, the "strategic theme" made up the supplementary curriculum of the academy. Transferred mechanically from the practice of the old academy, under new conditions it degenerated into a lifeless "written language," of significant scope, but of little practical use. Far from reality, cumbersome, often poorly coordinated with respect to its component parts, these themes, while taking up much time and effort, were, nevertheless, of small benefit in practice. Students of the preceding theoretical course were poorly prepared for such critical independent work and, therefore, gave shallow treatment which, understandably, had a superficial, stereotyped, and often simply inept character. In the final analysis, work on the strategic theme did not justify the expenditure.

A fundamental reform took place in the following year (1921/1922), which was a turning point in the life of the academy.

The impetus toward this reform was provided by the reform of the Red Army itself, which had shifted to planned training. The strong ties which knitted the academy and Red Army together necessitated a radical restructuring of all scientific-academic work in full accordance with trends which were taking shape in the army. Inasmuch as in the first years of the existence of the academy all attention, forces, and means were absorbed by the Revolution and the Civil War; inasmuch as it was necessary to be satisfied with what was at hand (in particular, with respect to teaching personnel); inasmuch as the course of academy teaching was more and more detached from the life of the army—under conditions of the breathing space which had begun they could and had to analyze all shortcomings, reorganize, and start out on a new path.

The General Staff Academy was renamed the Military Academy. Tukhachevsky, then commander of the Western Front forces, was named chief. On his suggestion a number of his comrades who had augmented their experience of the imperialist war with experience of the Civil War, were recalled from the front and assigned to the academy as instructors. A new posture for the Military Academy was worked out and confirmed, in accordance with which it was tasked with preparing qualified *genshtabisty* [general staff officers] to lead the troops in war and to guide their peacetime preparation. Together with this, the Military Academy, as a military-scientific center, was to attentively follow contemporary events and study the experience of the civil and imperialist wars, processing this for the Red Army. Henceforth, all teaching at the academy was to be permeated by the fundamental strategic and tactical ideas adopted by the Red Army.

Thus, close coordination with the concrete conditions of the existence and struggle of the *RKKA* [Workers' and Peasants' Red Army] and a consideration of the experience of the Civil War were included as the basis of

the academic system. The academy, taking part in working out the doctrine of the Red Army, was to keep pace with the army.

In accordance with the overall reorganization, significant changes were introduced in the strategic cycle as well. Their essence boiled down to increasing the attention given to issues of the materiel side of war and the conduct of operations (this concerned theory); in addition to this, instead of a "strategic theme" in the supplementary curriculum, it was suggested to develop applied work for thorough and detailed study of the organization of modern operations. The theoretical strategy course which existed up to this time had focused principal attention on the operational side; only a comparatively insignificant crumb fell to the study of the enormous area of materiel support.[3]

However, only in 1924/1925, in fact, were they able to shift to the mentioned reform. Before this time, the strategy cycle for a number of reasons continued to remain, for the most part, an operational cycle, since soon after sections which taught the structure of the rear, military communications, medical service, etc. withdrew from it (into the military administration cycle). "Techniques of staff service" (the former "service of the general staff") was included in the strategy cycle instead of these sections.

The overall task which stood before the cycle of strategy courses consisted of teaching students the correct understanding of the fundamentals of modern war. Here, it was considered that a thorough understanding of strategy could be obtained only by persistent independent work through the study of the history of military art, the history of wars in particular. The strategy curriculum of the academy would do its job if it were able to prepare students for such independent work; for this it had to illuminate the multisidedness of the foundation on which a strategic decision is based, by means of the study of the most important issues on preparation for war and army leadership.

We see here that in the study schedule, attention is given to both strategy (war) and operational art (operations). Below it will be shown that in reality study was diverted to the side of investigating operations.

The academic program pursued two aims: to illuminate the nature of modern war, encompassing strategic, political, economic, tactical, technical, and administrative issues which condition this; to analyze the work of higher operational organs (high command—*front*—army) for studying preparation for war and methods of controlling troop masses.

This was, in a brief and general outline, the evolution of the teaching of strategy in the first five years of the existence of the academy. Experiencing the direct influence of various changes in the overall course of academic life, the program in strategy during this period significantly changed more than once. Commencing in 1918 with a modest course—"foundations of modern strategy"—this program, gradually modified and supplemented, had attained significant scope in volume on the threshold of the second five years, and adopted content which was varied in nature. In the first years the expansion of the program was directed primarily toward the path of expanding its theoretical operational portion. It would be correct to state that in this period the strategy cycle focused its main attention on illuminating theoretical "foundations," somewhat avoiding an applied, technical bias.

Of what, then, did the content consist, and what determined the understanding of "strategy" itself? In the course of academy teaching, strategy as a concept was divided into lower (the study of operations or higher tactics), higher (the study of war), and peacetime (the study of the preparation for war and compilation of a war plan) strategy. Thus, we have here higher tactics equal to lower strategy. "Higher" tactics penetrated into the field of strategy, managing operations in a TVD;[4] strategy descended to tactics, becoming "lower." This uncomplicated "dialectic" was clearly unsuitable. It was difficult to be reconciled with the fact that the two-part formula "strategy—tactics," which had been simplified, meeting the conditions of the nineteenth century, and the first half of the Napoleonic campaigns in particular, but not including the entire content of the art of conducting military operations under modern conditions, had been put into circulation as before.

Up to the recent past, tactics was understood as the study of the engagement. In the Napoleonic Era, battle and engagement were essentially one and the same; strategy, having initiated the engagement, ceded control to tactics; at the end of the nineteenth century the engagement was now a group of battles, unfolding, however, in the immediate vicinity of the adversaries, and comparatively restricted with respect to time and space. Under these conditions, strategy, limited to the use of armed forces outside the field of engagement, became the "tactics of the TVD."

The situation has been essentially changing since the beginning of the twentieth century (the Russo-Japanese War); now massive armies, numbering millions and supplied with massive equipment, operate on hundreds and thousands of kilometers along a front and into the depth; maneuver has become possible not only before, but also during the engagement itself; mistakes in initial deployment, formerly fatal, are now corrected by means of railroad and automobile maneuver; control to a great degree has become complex, completely beyond the capacity of a single commander-in-chief. The engagement has been divided into individual parts, i.e., battles, the grouping of which is directed toward the achievement of the aims of the engagement. As a result, battle was sharply delimited from the engagement; the "engagement" of the past shifted to the "operation" of the present. Research of the operation came out of the framework of tactics, the destiny of which was the research of the individual battle, but not of a group of them. In grouping battles, the modern operation is a complex act; it is understood as the totality of maneuvers and battles on a given sector of the TVD directed toward the achievement of the overall aim established as the ultimate one in a given period of a campaign. Tactics is not up to the conduct of operations. This has become the lot of operational art. Hence, the former two-part formula, "tactics-strategy," has now turned into a three-part formula:

tactics/battle—operational art/operation—strategy/war.

Thus, what as recently as 1922 was called lower strategy (or higher tactics) in the academy now is called operational art.[5] Strategy is understood as the study of war, broadly encompassing all issues of organizing the struggle on an armed front in full accordance with policy indicators and economic conditions.

Thus, battle is the means of operation, tactics is the material of operational art; the operation is the means of strategy, operational art is the material of strategy. In this is included the essence of the above-mentioned tripartite formula.

In the period 1918—1923, academy teaching posed the problem differently than stated above. Conduct of operations occupied a greater place in the "strategy" curriculum. Strictly speaking, there was no strategy in the sense of a broad study of war in its modern understanding. Only in the following academic year, i.e., 1923/1924, did this course make its appearance, as given by A. A. Svechin.

III.

The first year of the second five-year period of the Military Academy of the *RKKA*, 1924/1925, was marked by a sharp turn in the history of the academy's teaching of strategy. In this year it succeeded in carrying out those measures for improving the program and method of teaching which had been "theoretically" adopted two years before. Apart from this, in general the strategy department almost completely restructured its training system.

In 1924, the Chief of Staff of the *RKKA*, Comrade M. N. Tukhachevsky, was named the main director for strategy for all military academies. The result of this measure was quick to be felt by the strategy cycle in the Military Academy.

There occurred a differentiation between teaching strategy (the study of war) and operational art (the conduct of operations). In accordance with this, with respect to organization, the strategy cycle was divided into two departments: study of war and conduct of operations. Thus, operational art entered into scientific-academic use at the academy, both as a specific scientific concept and as an academic discipline.

The department for the "study of war" posed for itself the task of illuminating all basic issues connected with the preparation for and conduct of war as a whole. The curriculum program encompassed a wide circle of issues on the organization of the struggle of an "armed nation" on all fronts of modern war: political, economic, and military. In the 1924/1925 academic year, seminar classes, which pursued as their goal a more thorough acquaintance with the thought of strategic classics and of the most prominent modern military authors through their works, were held for the first time in addition to lectures. Therefore, only those sections for which there were printed materials were presented for study. Two parts of *Strategiya v trudakh voyennykh klassikov* [Strategy in the works of military classics], compiled by A. A. Svechin, appeared in this way.[6]

In the course of subsequent years and up to the present time, the aims and missions of the department have remained the same. Changes have taken place only in the amount of time allotted for this and in the method of teaching. Beginning in 1926, the "study of war" has been expounded only by means of lectures.

Seminars in the military classics were not resumed. Apart from the course, which stated the theory of conducting war, there was also a "war economy" section, the aim of which was the illumination of the problems of materiel preparation for war. This course, extremely interesting in its topical significance and importance, was to provide the proper definition in the field of studying the influence of war on the national economy, and the methods and tasks of economic preparation of the country for war (development of an economic plan). Issues encompassed by this program were extremely significant and vast. Based on the experience of the imperialist and civil wars, a correct analysis was to be provided of the influence, which the national economy as a whole, and its various branches in particular, would be subjected to under conditions of modern wars. Furthermore, proceeding from these prerequisites and taking into consideration the probable nature of forthcoming wars, it was necessary to establish basic trends in the system of economic preparation for war on the basis of the actual economic substructure of the USSR.

The tasks which stood before the department, as regards the mentioned section, were, in truth, great. A particular difficulty was that there were no printed handbooks or texts on this problem. For the most part, it was necessary to teach and learn by auditing the teachers' lectures. The abundance and variety of issues required the work of a collective, which made homogeneous teaching difficult and created a certain lack of coordination. In many sections it was impossible to find qualified lecturers. Finally, the secrecy of much of the data required that many issues be illuminated in too general a form. The totality of the cited reasons, in sum, led to the fact that the "war economy" section is still at this time in an embryonic state.

Speaking of the department for the "study of war," it is necessary to recall the very interesting attempt to include in the overall course the section "Politics and war in the epoch of imperialism." Established for the first time in 1926 and repeated in the last academic year, this course, given by B. I. Gorev, immediately attracted attention to itself by the detailed analysis of the military policy of the epoch of imperialism, bringing to light, according to the experience of the wars of the twentieth century, a picture of political preparation and maintenance of war. The exposition concluded with an illumination of postwar imperialist politics according to the experience of national liberation and colonial wars which have taken place since the world war. In general, this course assigned itself (and resolved) the task of concretely clarifying, on an analysis of the political history of the most important wars of the twentieth century, the interrelationships of war and politics in the epoch and on the grounds of imperialism; politics is viewed here both as the overall aim of the war for which war is only a means and, conversely, as a means for preparing to serve the needs of war itself in the field of foreign and domestic policy.

We turn now to the "conduct of operations" department. It was recreated in 1924; having had no past experience (or, more correctly, having had adverse experience), it was not able to be guided by a verified model and had to search for new paths completely independently. In no way are we inclined to view this as bad; on the contrary, it seems to us that the absence of a stereotyped pattern created a favorable prerequisite for unfettered development.

The year 1924 was the first of a three-year period, 1924-1927, which has been characterized as a period of broad military reforms and fundamental reorganization in the development of the armed forces. The first years of the breathing space which followed the conclusion of the Civil War and the elimination of fronts were given to immediately putting into order the army apparatus and implementing a number of transformations of a local character. This daily activity, which required constant attention from the entire leadership stratum of the army, for a time put off the possibility of attending to a more radical reorganization of the army in all fields, a reorganization which bore a more general character. This year was marked by the beginning of this reorganization, the basic positions of which were rooted in the experience of the Revolution and Civil War.

The several years which had passed since the day of the immediate conclusion of the war made it possible to crystallize specific opinions in the field of the theory of military art as well. The Red Army, guided by the experience of its military past, was ideologically armed, proceeding along the path of establishing a military doctrine. As early as 1922 an animated discussion on the issue of military doctrine took place in the center and in the provinces; the discussion, however, was not brought to a conclusion, and instead of clarity it introduced confusion. It is, however, doubtless that the political, economic, and geographic features of the position of the first republic of workers could not fail to condition a specific influence on certain initial data in the field of preparation for war, as well as in the matter of training and educating the Red Army. Meanwhile, at this time the army still had no regulations and had little military-scientific literature, which inadequately served the military community. It was necessary to plan and set up landmarks on the path of developing a uniformity of

opinions; it was necessary to develop regulations and give them to the troops; it was also necessary to establish a specific foundation, appropriate to the spirit of work carried out in the army on the preparation of command personnel and among those who, upon completion of their training within the walls of the Military Academy, would proceed to the troops with the mission of energetically participating in the preparation and training of the army. In accordance with this, the program of the "conduct of operations" course received a specific and solid direction. Its content fully reflected the experience of the Civil War, in particular the summer campaign of 1920 against the White Poles.

What, then, were the opinions in the field of operational art?

Briefly characterizing them, it is possible to reduce them to the following two basic tenets:

1. Operations are conducted to destroy enemy armed forces personnel. However, under conditions of conducting modern operations in combat involving mass armies which are very capable of maintaining their combat capabilities, it is difficult (with the exception of rare instances) to count on the destruction of the enemy in a single operation. A correct reckoning of the situation will prompt the necessity (while technology provides the capability) of rebounding and coming out from under an inflicted strike: the enemy will attempt to slip away. But in detecting this, the advancing side should organize pursuit, attempting to attack and defeat the withdrawing enemy on lines and at times inconvenient for the enemy. However, taking into account the possible failure of these attempts, it is necessary to be ready for a decisive operation over the entire period of the pursuit on lines which the enemy cannot abandon. Here, it is necessary to attempt to place oneself in an initial position favorable for oneself and unfavorable for the enemy; this should be the result of preceding activities. Thus, the path to victory under modern conditions lies on the zigzag of an entire series of operations, successively developing one after another, logically connected to one another, united by the commonality of the ultimate aim, each one achieving limited intermediate aims which are in their totality the operational pursuit, in the process of which the attacker attempts to use both his physical and moral-political advantages simultaneously with the entire sum of partial strikes and so-called intermediate failures to more thoroughly disrupt the enemy, forcing him to enter a decisive operation under unfavorable conditions which are already inescapable. Consequently, the basic plan is characterized as follows: aims of operations—defeat and complete rout of enemy personnel; method of operation—uninterrupted advance; means—prolonged operational pursuit, avoiding pauses and halts, implemented by a series of successive operations, of which each is an intermediate link on the path to the ultimate aim, which is achieved in the final decisive operation.

2. The success of a "prolonged" offensive, an uninterrupted, deep pursuit (series of successive operations) is found in a direct connection with the successful fight against the consequences of accompanying operational exhaustion.

The Civil War provided clear examples of prolonged offensive operations which were conducted under peculiar conditions, very different from the conditions of the previous imperialist war. In pursuing Kolchak, our army covered more than 2,500 kilometers in 3 1/2 months, a daily average of 20-25 kilometers. It would seem that such a prolonged offensive should have suffocated; however, in this operation we not only were not exhausted, but we confront the fact of an increase in strength. The reasons lie in the ability to make use of bases forward of oneself; the army found almost everything necessary, including ammunition, in place. Losses were replenished from the Ural workers and the Siberian peasantry in rebellion. Areas rich in grain provided food. Warehouses of captured goods provided for needs in munitions and uniforms. In sum, the red armies were independent of their rear, in particular of railroad deliveries. While uninterruptedly and prolongedly advancing behind the withdrawing enemy, there was the possibility of not only not becoming exhausted, but, on the contrary, becoming fortified. There was no need for any pauses or halts. An analogous picture was observed in the liquidation of Denikin and Wrangel.

The experience of operations on the Eastern and Southern Fronts in 1919 resulted in several conclusions, which made it possible to optimistically view the capability for uninterrupted, deep pursuit without particular fear of experiencing the consequences of operational exhaustion. It was considered possible for small armies to gain large territories and have a rear supported by the establishment of the dictatorship of the proletariat; the attacker, reinforced uninterruptedly (at a time when the withdrawing enemy was weakened as a consequence of desertion), had the possibility of developing a swift advance (possible norm of 200 kilometers per week) in connection with the facility of establishing a rear. Local transport was sufficient for supply: divisions did not

depend on the railroads. Hence the conclusion: move boldly forward and do not fear exhaustion; everything necessary will be at hand.

These opinions suffered a fiasco in the Warsaw operation of 1920.

The conditions of combat on the Western Front for the most part substantially differed from the conditions of the Eastern and Southern Fronts. Basically this was determined by the difference in the features of Belorussia and eastern Poland from the features of the Ukraine, Donbas and Siberia with respect to the political and materiel support of the operation. Practically speaking, we were convinced of this difference soon after the commencement of our offensive from the line of the Berezina River.

The mood of the local inhabitants was not uniform for the entire region of our offensive. Where the Belorussian and part of the Lithuanian peasantry was clearly sympathetic to the Red Army, the Polish peasantry under the best of circumstances was passive. Volunteers poured into the army in Belorussia, but in Poland we had no volunteers. In general, we could not use the local population for replenishment.

The rapid advance of our armies from the Berezina to the Vistula soon resulted in an isolation of troops from the railroads; more correctly, here there was not an isolation (the distance did not exceed 60-180 kilometers for the entire operation), but rather a rupture between the troops and railroad supply. Roads were reestablished rapidly—12-20 kilometers every 24 hours—so that later this led to unwarranted optimism in solving the difficult problem of restoring railroad lines destroyed by the enemy during his withdrawal; in general, it could be considered that the railroads did not lag behind the troops. However, this circumstance did not save the situation: the absence of proper organization and the lack of adjustment of servicing military roads and mobile army supply installations (intermediate and main depots) on the one hand, and the insufficiency of rolling stock, mainly steam engines, on the other hand resulted in an actual lack of supply to the troops of necessary goods at a necessary time. In sum, disorientation in regular supply from the rear caused a shift to local means, the organized use of which, however, we were not handling; in addition to this, these means are not adequate.

With our approach to the Vistula, the situation in the rear was not very gratifying: the rear areas were stretched out; large railroad centers were obstructed, reserves in large portions were on wheels but did not get to the troops; replenishments were also on wheels; mobile troop installations could not escape the common lot and were also jammed in the rear (division artillery depots); in searching for a way out of the situation which had been created, the troops fell back on local transport, using an enormous number of carts. Soon they were running out of ammunition, and it was necessary to resort to a strict limitation on its consumption. Losses over 1 1/2 months of pursuit were strongly felt, divisions arrived at the Vistula having no more than 2,000-2,500 to 3,000 bayonets; replenishments were bogged down in the rear.

Thus, if in our fighting on the Eastern and Southern fronts we should have reckoned with the operational influence of the rear to a relative degree, then in our fight against the White Poles in the summer of 1920 the rear weighed us down with the burden of its lack of structure. We were not in any condition to cope with either its organization or with the appropriate Sovietization of the rear, the results of which we felt in full measure with the approach to the Bug River.

The conditions of our offensive from the Berezina to the Vistula in no way allowed for strategic growth; on the contrary, they led to strategic exhaustion. In the final analysis, at the moment preceding the decisive operation a situation was created where there were tendencies in places in favor of halting for a while on the line of the Bug for the purpose of organizing a rear and adding to the thinning ranks of reserves. The higher command rejected this delay, and the troops continued on without a pause from the Bug to the Vistula. As is known, we withdrew again from the Vistula to the Bug, and further to the Berezina to the initial position. Our calculations of local assets were not justified. Our rear did not cope with its task, and our "prolonged" offensive, expressed by a number of successive operations, was not crowned with success. Therefore, the question of the possibility of similar offensives under conditions which were quite obviously different from the favorable conditions of the Southern and, in particular, Eastern Fronts was posed. In order to answer this question, one of life or death for the theory of "prolonged" offensives, it was necessary to clarify if the rear, with appropriate organization, could support the necessary depth of the uninterrupted advance of pursuing forces. From here the obvious necessity to create the foundations of this organization, to refine the details of this work, and to establish the appropriate principles for rear control became clear.

In the summer of 1920, we were far from being fully armed with correct ideas in the area of structuring a rear and controlling it. We suffered not from a lack of reserves of necessary types of supplies or prepared replenishments—they were in storage depots and bases, in reserve units, and simply in echelons far behind—but we were unable to deliver them, i.e., here there was an evident gap in the organization of the rear; in this area we did not have the necessary homogeneity of views, and each "service" worked independently, predominantly espousing its own interests, without close mutual adjustment and often without coordination. We worked amateurishly. The fact that in other cases the command and staff let the reins of control out of their hands allowed to no small degree for inadequacies and mistakes in rear operation. The rear sometimes was assigned tasks completely beyond its power, or, on the contrary, command was influenced by rear conditions. In general, inadequate technical knowledge of the organization and service of the various branches of the rear was obvious; this resulted in such problems as cited above in the field of operational control of the rear.

The summer campaign of 1920 demonstrated that we were not able to organize the rear or control it: hence the conclusion that this must be studied. It is necessary to be able to structure the rear in such a way, correctly assigning missions and using assets, so as to support the possibility of a "prolonged" offensive by means of planned rear operation without being tempted to rely on local assets. One cannot be limited to faith alone in the miraculous force of some kind of super-brilliant operational decisions; it is necessary to soberly take into consideration all materiel conditions and to "fit the legs into the clothes." Under modern conditions the operation (even more so, a successive number of them) has the right to count on success only if the ability to execute the adopted operational plan is supported not only by the correlation of forces, correct choice of goal, and direction, but also by materiel. For this, a cold calculation for each branch of the rear is needed above all.

The two prerequisites given above were established as the foundation of the "conduct of operations" course. The regularity of "prolonged" offensives and their fundamental possibility were acknowledged. However, the actual possibility of their implementation was directly dependent on the organization of materiel support of the operations. Therefore, the center of gravity of the content of the curriculum consisted of the all-round study of the organization of an army operation; a significant portion fell to its materiel support. All work was structured on the purely practical study of the issue. Here, not only a clear understanding and knowledge, but also acquisition of specific practical skills were required. In connection with this a method of study was organized. It was adopted as completely independent work on the part of the student with subsequent class analysis of this work. The lack of exhaustive texts made this work somewhat difficult. This lack was compensated for by lectures.

The study of the army operation by the applied method, evidenced in the decision of the primary operational mission which from 1924 replaced the "strategic theme," pursued as its goal practical experience for the students in the all-round and thorough preparation of an operation. The students had to make an operational decision and then support the overall success in operational, political, and materiel respects. In connection with this, the students worked successively in the roles of army commander, army chief of staff, and then chiefs of combat arms and chiefs of "services." On the basis of a theoretical acquaintance with the technical resources, organization, and service of all forces and means being used, the multi-sided practical work in supporting the operation was disclosed. In the operational respect, issues concerning the organization of reconnaissance, communications, *maskirovka*, use of artillery, organization of air defense, and, finally, engineer support of the operation were studied. Materiel support of operations was studied by means of often very painstaking research of the supply service, military communications service, medical and veterinary services, and manning. Finally, in the field of political support of the operation, appropriate aspects of the work of the Main Army Directorate were brought to light. In sum, the students received a complete idea of the totality of measures connected with the all-round preparation of an army operation. In addition to this general result, practical experience in work at various roles imparted thorough knowledge and skills regarding the techniques of operation of the various branches of the rear and of their control. The accepted method of study—independent work with pencil in hand, everything based on calculation, nothing based on faith—allowed for solidity in assimilating the subject on the one hand, but burdened the student with technical work on the other. Operational "arithmetic," here understood as the entire calculative aspect, made itself felt. For example, in studying the organization of communications in an army operation, not only were the principles of this organization as applied to the given concrete situation examined, but also a calculation of the necessary assets (wire, insulation, posts, etc.) was done. And this was so for each problem. The goal pursued was to keep both feet on the ground and heads out of the clouds, to maintain the framework of available capabilities. This approach to every

decision represented the positive aspect of operational "arithmetic." A shortcoming, perhaps, was some excess detail in calculations, which undoubtedly, increased the "arithmetic" at the expense of theory.

Nevertheless, it seems to us that basically the approach taken is the correct one. Irresponsible operational "deviations," which are especially harmful, will disappear when encountering the trend for materiel calculation of the operation. It is completely probable that it is necessary to reduce somewhat the scope of applied work. Perhaps it is not necessary that every academy graduate know well the technical details of the work of, for example, the chief of the army medical unit. Perhaps it is sufficient here to limit oneself only to familiarity with the fact that the unwarranted flowering of "applicativeness" will proceed to the detriment of theory. All this is true, and all this should be taken into consideration and corrected in the future. Nevertheless, the fact that increasing attention toward the materiel basis brought about a decided increase in competency in the field of organizing the army operation on the whole and in various branches of its operational, political, and materiel support cannot be discounted. We must always and everywhere be able to consider and strictly calculate each step. In this lies the guarantee of our success.

ENDNOTES

1. N. Varfolomeyev, "Strategiya v akademicheskoy postanovke," *Voyna i revolyutsiya* [War and revolution], Book 11 (Gosudarstvennoye Izdatel'stvo, 1928), pp. 78—93.
2. This issue is brought to light in the article by Ye. Shilovsky, *Evolyutsiya akademicheskoy podgotovki* [Evolution of academic preparation].
3. A significant part of the work in studying the foundations of materiel support was done in the large departments which existed independently, i.e., not connected with the department of strategy. Now, with the formation of cycles of courses there was the possibility of consolidating all these related disciplines under an overall leadership, having collected them into a single cycle of strategic courses; this, above all, eliminated harmful discord and provided close coordination of the study of the issues of troop leadership and rear operation. The cycle of courses consolidated the following disciplines: strategy, strategic operations of cavalry, feeding of the active army, strategic preparation of communications, engineer preparation of the state, and naval affairs.
4. Translators note: TVD [*teatr voyennykh deystviy*] is sometimes translated as "theater of military operations," "theater of military activities," "theater of military actions," "theater of strategic military actions." The 1986 *Voyennyy entsiklopedicheskiy slovar'* [Military encyclopedic dictionary] gives the following definition:

   > ... an extensive territory of part of a continent with adjacent seas, or a water area of an ocean (sea) with islands and the adjacent coastal area of continents, and the air and cosmic space above them, within the limits of which strategic groupings of Armed Forces (Ground Forces, aviation, Navy) are deployed and military operations on a strategic scale can be conducted. The boundaries and composition of a TVD are determined by the military-political leadership of states (coalitions of states). Thus, the military-political leadership of the US and NATO divided the territory of Western Europe into 3 ground force TVDs: Northern Europe, Central Europe, and Southern Europe. Historically, each of the 4 oceans (Atlantic, Pacific, Indian, and Northern Arctic) is an oceanic TVD. Each TVD has specific military-political, military, economic, geographic, and ethnographic conditions and engineer preparation of the territory, which affects the preparation and conduct of military operations.

   For the sake of continuity I will use the acronym TVD throughout.
5. The terminology belongs to Military Academy professor A. A.Svechin (*Strategiya* [Strategy], second edition, p. 14 and following) who gave the course on strategy in 1923-1924.
6. At these seminars, the following themes were developed:
   1. Positional strategy (text: Leval, *Introduction to the Positive Part of Strategy*).
   2. Aims (text: Verdi, *On the Object of an Operation*).
   3. Overall and operational basis (text: Verdi, *Operational Basis*).
   4. Flexibility of strategy (von der Holtz, *Strategy and Army Leadership*).
   5. Basic views of Clausewitz on Strategy (Clausewitz, *Foundations of Strategic Decision*; Svechin, *Istoriya voyennogo iskusstva*/History of military art).
   6. Plan of the campaign (Foch, *Conduct of War*; Svechin, *History of military art*).
   7. Schlieffin's plan for German's war on two fronts (Hans Kuhl, *The German General Staff*).

FORMATION AND DEVELOPMENT OF THE THEORY OF OPERATIONAL ART (1918-1938)[1]

Colonel (retired) I. Mariyevsky

Operational art is the theory and practice of the preparation and conduct of all types of military operations on all scales. Operational art as a military-theoretical discipline arose comparatively recently. The birth of the theory of operational art dates from the beginning of the twentieth century. The history of operational art has been insufficiently illuminated in our literature. The latest work in this field is the work of Major General V. A. Semenov, *Kratkiy ocherk razvitiya sovetskogo operativnogo iskusstva* [A brief essay on Soviet operational art].[2] However, even with this one cannot trace the history of the development of the theory of operational art. In the present article the author attempted to illuminate some issues in the formation and development of the theory of Soviet operational art.

The existence of the theory of operations of the Soviet Army began with the selection, accumulation, and systematization of data on operations of World War I and the Civil War. The first printed works in which a systematized account of operational knowledge was, more or less, given appeared in 1919-1920.[3] In these works were stated the most general principles of ground forces operations. After the Civil War, a significant amount of research was published which generalized the experience of the last wars on the issue of operational and tactical troop actions.[4]

The works of B. Barsky and N. Suleyman presented problems of the materiel support of operations and ways of resolving them.[5] The widening of operational knowledge was made possible to a large degree by the military-historical work of A. Svechin, V. Novitsky, A. Zayonchkovsky, N. Kapustin, A. Bazarevsky, N. Kakurin, and V. Melikov, in whose works concrete data on operations conducted in World War I and the Civil War were illuminated.[6] The works of Ludendorf, Falkenheyn, Kuhlman, and others were translated into Russian to study the experience of the German and French armies in World War I, to which the Higher Military-Editorial Council of the Republic gave serious significance.[7]

In 1923, the works of Clausewitz, one of the most thorough writers on military issues, were published in Russian.[8] The following year, under the editorship of A. Svechin, the first volume of *Strategiya v trudakh voyennykh klassikov* [Strategy in the works of military classics] came to light, in which the views of many famous military theorists and practitioners were set forth with extensive commentaries by the editor.[9]

In many theoretical and military-historical works, the operation was treated in the most varied manner: an operation is a grouping of battles for the achievement of the aims of strategy, the "totality of strategic and tactical actions directed toward the achievement of the one mission of the given war, being concluded in large part by a large combat encounter of the sides;"[10] the "totality of maneuvers and battles on a given sector of a TVD[11] directed toward the achievement of the overall aim assigned as ultimate in the given period of a campaign;"[12] "an act of war, in the course of which troop efforts are directed without any interruption on a specific area of the TVD toward the achievement of a specific intermediate aim;"[13] "the sum of various activities directed for the achievement of one of the aims which have been set forth by strategy."[14]

The theory of operations was usually included in strategy (more rarely, in tactics) and was marked by the terms "operational leadership of troops;" "operational matter," "operational technique," "tactics of mass armies," "tactics of a TVD," "strategic art in an operation," "conduct of an operation." The term "higher command" was also used. Thus it was called "Official guidance for commanders and field control of armies and *fronts*," as stated by M. V. Frunze in 1924.

The inclusion of the theory of operations, now in strategy, now in tactics, and the mixed nature of the terms which marked this theory created more than a few difficulties and elicited lively arguments.

The two-part formula "strategy—tactics" had over the course of a number of centuries contained all the substance of the art of conducting military actions. Until the middle of the nineteenth century the forms of conducting operations issued from the small numerical size of armies, the properties of their armaments, the presence of an area free for maneuver in a TVD (the absence of wide strategic fronts), free (open) flanks, and a rear (communications). The fate of a war was often decided by a single operation or campaign. At that time an operation consisted of two parts: maneuver, which had the purpose of placing the main forces of an army in a favorable position, and the general battle, i.e., a battle in which the main forces of both opposing sides took part. From this, military art was divided into strategy and tactics. Here, it was considered the

ideal of military art in general and strategy in particular . . . to resolve the war by a single, 'general' battle, i.e., in the first days of military operations, in the first encounter to destroy [or take prisoner] all enemy armed forces.[15]

In the last quarter of the nineteenth century and at the beginning of the twentieth century, as a result of the rapid growth in the production forces of society, conditions for conducting armed combat increased significantly in complexity. By this time, compulsory military service was introduced in all major European countries.[16] This made it possible to prepare cadres beforehand and to draft a large number of trained reservists into their army during the war. Mass armies appeared. [17]

Together with the numerical growth of armies was a rapid quantitative and qualitative development of arms and combat equipment. Rifled weapons, including new types (machine guns) had been significantly improved by the beginning of the Twentieth Century, and the attempt to fully exploit the maximum power of their fire (long range, rapidity of fire, accuracy, close grouping) brought forth a widening of the scope of armed conflict, never before seen.[18]

The rapid development of railroads facilitated the resolution of problems of troop mobilization readiness and made it possible to deploy mass armies and supply bases on a wide front and maneuver troops and materiel in the course of the war; the appearance of telegraph made it possible to control mass armies.

New conditions of armed combat gave birth to new methods and forms of conducting it. The general battle declined. There was no longer one "center"of battle; rather this changed into a "combination of a number of smaller battle centers scattered in space and time," not linked tactically but requiring unification and leadership in aim, place, and time.[19] This was a new phenomenon in armed combat. Russian military thought at first called such combat actions army battle [*armeyskiy boy*], "battle in large masses,"[20] and then used the term "operation."

Historically, the Mukden Operation in the Russo-Japanese War of 1904-1905 can be considered the first operation of this new type. This operation is characterized by a wide front (more than 100 kilometers) and depth of deployment (as much as 60 kilometers), unprecedented duration (2 weeks), combination of various actions (offense, defense, withdrawal), and great quantity of forces and means enlisted to participate in it (approximately 300,000 soldiers and 1000 guns on each side). In this operation, troops maneuvered on the battlefield beyond its boundaries, were substituted, were replenished, and rested. Battle as a means of operations began to change in its essence as well, turning into a combination of fire and movement. Russian military theorists who noted the new phenomena in armed combat stated their observation in 1912 on the necessity to create a new theoretical discipline for studying operations—*operatika*. In reality, the changed nature of the operations, the mass of troops and equipment used to conduct it, the organization of movement of large troop masses, the great depth of columns and difficulty in deploying them for battle, maneuver in the course of the operation (battle), difficulty in organizing the rear of the operation, and many other things required a specific theoretical base. Now a certain theoretical foundation was necessary to develop a plan of operation.

World War I introduced serious changes into the nature of armed combat. This war most fully demonstrated that it was impossible to count on finishing off the enemy's entire active army with a single blow, i.e., a general battle, even though it be in a gigantic strategic operation. Henceforth, war began to be composed of a number of campaigns, and each campaign of a number of operations organized in time and space. For the implementation of these blows, for uninterrupted control of large troop masses assigned to inflict them, and for the organization of troop supply, a definitive period was required for dividing the active army not into individual ones but into partial armies and combining them into *fronts* [21] or army groups. The organization of armed combat in a TVD or in a large part of it was assigned to the *front*, while the armies making up the *front* were assigned the organization of armed combat on operational directions. *Front* and army operations came into being. In the Civil War this regularity was manifested with even greater force. The war was conducted on an unprecedentedly wide front (more than 8500 kilometers in 1919), at various times by the forces of 12 *fronts* and 4 individual armies. Its conduct consisted of the sequential rout of the primary strategic groupings of the enemy. The rout was achieved as a result of uninterrupted implementation of consecutive operations until the complete liquidation of the enemy. Operations were characterized by unusual mobility of *fronts* and maneuver of troops.

Thus, in World War I and the Civil War new traits in military art were manifested which were not encompassed by the old formula "strategy—tactics." One of the first to come out against this formula was Professor

A. Svechin.[22] In an introductory lecture for the strategy course given at courses of the Administration of Military Commandants at the Frunze Military Academy on 1 September 1924 on the subject "Integral Understanding of Military Art," he said:

> . . . we suggest that the maintenance of the old division of military art into strategy and tactics at the present time is absurd, since in reality the general battle which earlier served as the basis of this division has disappeared.[23]

With the naming of M. N. Tukhachevsky (who also held the post of Chief Director for Strategy of All Academies) that very year as Chief of Staff of the *RKKA* [Workers' and Peasants' Red Army], the Department of Strategy at the Frunze Military Academy began its work for the purpose of researching issues on the conduct of war and conduct of operations. The subject of "conduct of operations" included only operational techniques, which was understood as the totality of procedures in organizing and supporting troop operational activities. Professor K. Berends in his work *Strategicheskiye vekhi* [Strategic landmarks], which, according to his modest admission, was only an honest transmission of the views and thoughts of the department of strategy and military art, wrote on this issue, "Operational techniques in our understanding are only that part of strategy which comprise the subject of conduct of operations," while "the operation is a combination of combat actions to achieve a specific aim."[24]

The study of the operational actions of an army at this time often took the form of general discussions which did not have great practical significance. Therefore, Frunze's demand for "less general discussion, more work on details and techniques of conducting operations" was not an indiscriminate one.[25]

The study of the literature of the 20s shows that right up until 1926 the formula "strategy—tactics" remained unchanged. Moreover, as Tukhachevsky noted, the terms "strategy" and "tactics" were treated differently by everyone, and often contradictorily.[26] Such a situation was intolerable. And here it was not only a question of terminology, the significance of which is important in theory, but of the fact that after World War I and the Civil War the theory of military art had ceased to reflect the fundamental qualitative changes which had occurred during them. Before those wars the theory of military art was developed only as a theory of techniques for conducting armed combat. However, the experience of those wars, especially the Civil War, showed that now a single technical theory was completely inadequate. Success in war, as never before, began to depend on proper political indoctrination of the masses, on their understanding of the aims of the war, and also on the economic condition of the country. From here the leadership of armed combat began in practice to include not only the technical art of its conduct proper, but also the art of political leadership of the masses and the art of managing all the resources of the country for the economic support of the war. The existing theory of military art was not able to encompass the content of armed combat in a future war which the imperialists were preparing against the Soviet Union.

A way out of the situation which had been created with the theory of military art, or out of the crisis, as A. V. Golubev called it, was found in the following. [27] Tukhachevsky stated the idea of the necessity of creating "a science concerning war, which until now did not exist."[28] In his opinion, none of the participants in World War I were prepared for its dimensions and forms, and only in the period of a "groping" development did their combat capabilities evolve, in particular because they did not have a science concerning war.[29] This science had to be a synthesis of the axioms of modern war, both as a socio-political phenomenon and as a process of armed combat and its economic support. Tukhachevsky proposed to call this new science concerning war "polemostrategy."[30] The primary task of polemostrategy was to be the higher generalization of the art of conducting modern war and the theoretical solution of the problems of war as armed combat on the whole. As for military operations, according to Tukhachevsky they were to comprise a subject in the study of strategy, while the study of battle of up to a corps inclusive was to be in the study of tactics. Svechin, who more than once stated the necessity of a new classification of the theory of military art and who gave it a foundation in his book *Strategiya* [Strategy], proposed that the study of the conduct of war be made the subject of strategy, the conduct of operations the subject of operational art, and the conduct of battle of up to a division, inclusive, the subject of tactics. He explictly emphasized that "the study of the methods of conducting operations is a task not of strategy but of operational art."[31] Tukhachevsky did not insist on the term "polemostrategy" and agreed with the classification suggested by Svechin, although he criticized him on many other issues. It was admitted that the formula "strategy—tactics" had become obsolete in all respects. Therefore, the division of military art into three parts—strategy, operational art, and tactics—was confirmed in the Soviet Army from the mid-20s.

Thus, in a brief sketch: armed combat as a whole—operation—battle, as the three levels of conducting war in the Soviet Army, corresponded in the theory of military art to strategy—operational art—tactics.

It cannot be said that the term operational art more fully reflected the content of the theory and practice of operations. This term was called into question earlier and even now has its opponents. However, it has firmly entered into the literature and we have become accustomed to it.

In this connection it is appropriate to note that some foreign military writers censure Soviet military theorists for the fact that they "wedged in" operational art between strategy and tactics. Thus, the American military writer Walter Jacobs in his article *Operational Art* published in November 1961 in the journal *Army* indicates that the purpose "of such an innovation is unclear," and that "in Western military science operational art as a theoretical concept is completely rejected." In the conclusion of his article the author says that "The West should not add this concept to its armory, simply because it does not allow for the development of its military art."

Is this so?

Soon after World War I, in some foreign armies attention was also turned to the fact that the modern operation, on the strength of its inherent features alone, was a new phenomenon subject to thorough study. In Western European countries issues on the conduct of war were examined in strategy, issues of the preparation and conduct of operations in lesser strategy (England) or higher tactics (France), and battle in tactics. Thus, in some Western armies the issue of the conduct of operations became a subject of study in a special discipline.

Operational art, which was formed in the Soviet Army into an independent theory of military art, encompassed the organization and leadership of armed combat in a TVD, usually within the framework of a *front* (army), for the purpose of executing missions assigned by strategy.

The essence of the interrelationship of operational art with strategy and tactics at this time was represented in the following way. As an intermediate level between strategy and tactics, operational art contained elements of both. Golubev wrote:

> If strategy groups and organizes operations for the achievement of the aim of the war, then operational art, within its boundaries, organizes and groups the immediate combat efforts of the troops in order to achieve those aims which strategy places before them. Thus, in the very essence of operational art are presented those elements which comprise the essence of strategy (the overall routine of the conflict and the grouping of the combat efforts of the troops to achieve specific intermediate aims of the war), not on the scale of the war as a whole, but rather on the scale of its individual sections.[32]

The conclusion was reached that inasmuch as war is a unified process for the use and actions of armed forces, there exists a dialectical interconnection and interdependence between operational art, tactics, and strategy. "Battle," wrote Varfolomeyev, "is the means of operation, tactics is the material of operational art; operation is the means of strategy, operational art is the material of strategy."[33] This meant that the more effective the battles, the more successful the operation. Therefore, the more improved tactics and their means, the more dynamic and decisive the methods of conducting operations could be, all else being equal. From here, operational theory could not be created in isolation from tactics; it would be impossible to understand operational art without a thorough understanding of the sphere of tactics. Strategy had such a dependence on the capabilities of operational art, despite the fact that strategy determined the aims of operations, and the forces and means for their implementation. Consequently, the theory of operational art is a whole whose integral parts are organically connected, conditioning one another in a specific way. V. Melikov correctly wrote, "One cannot build a watershed or construct a wall between strategy and operational art, since here one flows from the other, supplementing one another, i.e., the same way as operational art and tactics."[34]

The study of ground military operations is included in the subject of the theory of operational art. At the time being examined, the term "ground operations" was understood as the activities of ground forces in a theater of war jointly with aviation, and jointly with a river flotilla along large rivers, having as their aim the rout of a specific enemy grouping or opposition to this grouping. With respect to types of troop actions, ground operations were divided into offensive and defensive; with respect to scale they were divided into army and *front* operations.

The combat actions of troops making up an army and their materiel support, implemented in time and space into the execution of the mission assigned by the *front*, comprise the essence of an army operation. The concept of *front* operation was understood as the *front's* execution of a number of strategic missions into which the main command subdivided the current stage of the war. Keeping in mind this mission, the *front* determined the ultimate aim of its operation, broke it down into intermediate missions, and assigned their execution to the armies in its make-up. Within the limits of these missions and the forces and means allotted by the *front* in accordance with the situation, each army conducted its own operation.

Thus, a *front* operation, encompassing an entire TVD or a large part of it, consisted of army operations connected by an overall mission and close cooperation between one another on the basis of the overall plan of the *front* operation.

The art of conducting an operation (*front* and army) was perceived as the ability to mass forces and means on important directions. It was suggested to have several groups in the operational troop structure, namely a strike (counterstrike) group designated for activities on the main direction; a holding (auxiliary) force having the mission of working together with the shock group; and feint groups created to divert enemy attention. These groups were created chiefly by means of internal regroupings of army and *front* forces. Here it was emphasized that "maneuver is successful only when personnel and technical means of battle are skillfully distributed (into indicated groups), achieving a ram-like massing on decisive directions at decisive moments."[35]

Everything stated above was included in the most general form in the content of the theory of operations and determined its tasks. The major ones were the following: investigating the operational nature of a future war; determining the role and place of combat arms (branches of the armed forces) in a ground operation and the requirements for their organization and combat preparation; determining the theoretical foundation of the *front* and army operation—aim, scope, operation support techniques,[36] and control (work of command and staff) developing a methodology for calculating forces, means, time, and space necessary for the operation; developing foundations and techniques of maneuvering such as march-maneuver,[37] and railroad and automobile maneuver; investigating issues connected with the organization and work of the operational rear.

The formation of the theory of Soviet operational art proceeded under conditions of critical discussion, since various points of view on the nature and content of the theory of operations were discovered.

Many old military specialists based their judgments concerning the nature of future operations only on the purely military experience of past wars, while the social and class nature of the opposing states and the rapid growth of technical means of combat were not sufficiently taken into account. They presented the theory of operations in the form of a system of general ideas coming primarily out of the so-called "eternal and unchanging principles of war," irrespective of the Red Army, irrespective of where, irrespective of with whom, and irrespective of under what conditions it would have to fight. Girs wrote:

> In the field of military-scientific research is included mainly an examination of issues concerning the adaptation of conditions which are, in and of themselves, unchanging to conditions connected with a specific, concrete situation.[38]

The metaphysical nature of similar views is obvious.

M. V. Frunze, M. N. Tukhachevsky, A. I. Yegorov, V. K. Triandafillov, I. E. Yakir, A. I. Sedyakin, I. P. Uborevich, N. Ye. Varfolomeyev, and others were in favor of developing a theory of operations for a concrete war in defense of the only socialist state in the world. In their opinion this theory would serve as the foundation of a specific system for conducting operations and a guide specifically for the Red Army. Above all, the theory of operations would have a distinct research task proceeding from the military-political aim of a future war, i.e., to overwhelmingly repel the aggressor. This aim could be achieved only by means of implementing broad offensive operations directed toward the complete rout of the enemy. Therefore, they considered it necessary to develop, above all, offensive operations. The predominant attention to offensive operations was also explained by the complexity and difficulty of organizing and implementing them.

Possible forms of operational maneuver in offensive operations were considered to be the following: a *frontal* strike, a strike along converging directions (double penetration using a favorable *front* configuration), a combined strike—the organization of several strikes of various strength on a wide front (the so-called blasting strikes), envelopment (of one or both flanks), and encirclement. All these forms of operational maneuver were

widely used during the Great Patriotic War. Defensive operations were not ignored, but they were viewed as subordinate to the interests of the operational offensive.

The first All-Union Congress of the Military-Scientific Society, which took place in 1926, played a large role in the formation of operational art. At the congress, in the work of which M. I. Kalinin participated, basic issues of the defense of the country and the development of the armed forces and theory of military art were discussed. There were 16 talks given, including those of Tukhachevsky (*Voprosy sovremennoy strategii* [Problems of modern strategy]), Triandafillov (*Razmakh operatsiy sovremennykh armiy* [The scope of operations of modern armies]), and Kamenev and Tsiffer (*Osnovnyye zadachi taktiki* [Basic tasks of tactics]). In his presentation Tukhachevsky emphasized that the theory of operations had to pursue the aim of developing "the art of destroying enemy armed forces" as the most economical method of conducting a war. This had to be viewed as the foundation for educating the Red Army; it had to be studied in full, grasped entirely, and implemented.[39] This was stated in an address to those old specialists who, basing themselves on the experience of World War I, asserted that in a future war it would be impossible to place before oneself the goal of routing the enemy armed forces. In the collection *Grazhdanskaya voyna* [The civil war] it was indicated that

> the aim of an operation can be either the seizure of enemy lines of communication or the penetration of his front or, finally, an attack with the envelopment of one or both flanks. One could not place before oneself the aim of "destroying" the enemy. Such a statement of the issue expresses nothing. This is a dream which cannot be fulfilled

and, therefore,

> in the majority of cases remains empty noise.[40]

The positions stated by Tukhachevsky on the aim of operations were supported by the majority of the congress delegates. They had great theoretical and practical significance, since, henceforth, the varied treatment of the aim of operations was replaced by a clear and solid requirement: in all cases the aim of an operation was solely the destruction of enemy personnel and equipment, after the achievement of which any other operational mission could be resolved. Tukhachevsky also emphasized that "operations should not be conducted anarchically or without principles. We must be permeated by a single, overall method."[41] Each operation should have an aim and plan which determines the actual method of action. The basis of the plan should consist not of "repelling the enemy," "capturing his flanks," but of encircling and destroying the specific operational grouping of the enemy. The form of the operation, which henceforth was to be determined depending on the direction of the main strike, had to correspond to the plan of the operation. It was required to carefully work out and formulate the aim, plan, and form of the operation extremely clearly and concretely. To achieve the aim of the operation, it was recommended to create powerful shock groupings—rams.

In order to theoretically solve the complex problem of "what must we immediately prepare for"[42] the field of conducting operations, the "eternal and unchanging principles of war" could not be taken as initial data. The advocates of a concrete theory of operations considered initial material to be the political goals for the sake of which the war was necessary; the human material from which the Red Army and the armies of probable enemies were created; the organization, tactics, combat preparation, and probable numerical composition of the Red Army and that of its probable enemies; military equipment and prospects for its development, nature of TVDs and possible operational activities of the enemy; and operational experience of the past, especially the last war. In attempting to scientifically determine the nature of operations in a future war, Soviet military thought searched for answers to such questions as the possible density of an armed front (at the initial period and during the course of the war), probable scope, tempos, materiel needs and methods of satisfying them; what changes to expect in former ways and means of conducting operations, and the possibility of substituting them with new means (and, if so, which ones specifically); in what direction must the technical outfitting, organization, and combat preparation of the Red Army develop in order that these methods provide the greatest effect, etc. In searching for answers to these questions, very great significance was attached to military history and its lessons.

In the course of carrying out the first five-year plan for the Soviet Army, a new materiel-technical base began to be created, the period of the army's technical reconstruction ensued, and the army began to obtain the most modern weapons. All this fundamentally changed the old impression about operations.

The newest combat assets indicated that a new stage in operational art was beginning, where the essence of the operation was the centralized interaction of new means of destruction which possessed various combat (strike) and maneuver capabilities. In connection with this, Tukhachevsky indicated:

> we, of course, cannot remain at the former level of our military-theoretical thinking . . . , we cannot fail to consider the five-year plan in the theory of military affairs of the Red Army . . . or react to it with an appropriate restructuring of military-theoretical tenets . . . [43]

A new orientation in the field of the analytical thought of the Red Army was provided by the Chief of Staff of the *RKKA*, A.I. Yegorov, in a welcome address at the Frunze Military Academy in connection with its 15th anniversary. "The main and fundamental task of military art," he wrote, "is not to allow the formation of a continuous front, by giving operations and battle a crushing blow and a rapid tempo "[44] For the theory of operational art this meant that it was necessary to find the most effective method of crushing the entire operational defense of the enemy and subsequently routing the primary operational grouping.[45] In his work *Udarnaya armiya* [The shock army], Varfolomeyev demonstrated that the operations at the end of World War I were conducted in linear forms, i.e., combat was conducted the whole time on the line of direct contact with the enemy on the principle of "wall to wall"; the offensive was conducted in one "operational wave" (echelon) primarily composed of infantry divisions, which had often been used in overcoming the tactical defense. Where breaches were successfully formed at some point in time, there was no one to take advantage of them, since the infantry, if it was there, could not, in view of its mobility and fire power, be a means for developing a tactical penetration into an operational one. The numerous reserves of the defender, not pinned down by the attackers, maneuvered freely and always succeeded in closing the breaches, which had usually been made with a great deal of effort. The front of the defense pressed in or moved back, remaining operationally invulnerable. Operations developed very slowly, exhausting terribly the advancing armies both materially and physically.[46]

Soviet analytical thought reached the conclusion that in a future war a continuous strategic front was inevitable and it would have to be penetrated. The tactical capability of rapidly opening a breach in the enemy's tactical defense, thanks to the principles of deep battle, made it possible to reject maneuver before the enemy front, as was done in the war of 1914-1918, but rather to carry it through these breaches beyond the enemy front into the operational depth. The theory indicated that it was namely here that it was necessary to direct new combat assets—a mass of tanks, motorized infantry, mechanized cavalry, and aviation. Their great mobility, fire power, and strike force would make it possible to break an immobile front from within, and this would make it possible to develop wide maneuver actions. The basic principles of such an operation were not linear, but deep strikes of enormous penetrating force. Inflicting a deep strike was understood as simultaneously destroying, suppressing, and pinning down not only those forces of the defender which were designated to repel a strike from the front, but also those which were located behind the front in its operational depth; actions would also be directed against rear areas, headquarters, railroad junctions, etc. Requisite principles of success of the deep strike were the gaining of superiority in the air, isolation of the battle area from approaching enemy reserves, and interdiction of materiel being sent to his attacking troops. This method of conducting operational activities was called the deep operation.

The development of the theory of the deep operation is a great achievement of Soviet military-theoretical thought. An account of the foundations of this operation is not the subject of the current article. Here we will only point out its essence. It was conceived to implement the simultaneous destruction of the operational defense by means of a strike from the front for the purpose of penetrating the tactical defense of the enemy and forming a breach in it, and a strike in the depth through this breach to penetrate the operational depth, implemented in close cooperation with aviation. In accordance with this, the operational structure of the strike group of the attacker should consist of a penetration echelon (chiefly infantry reinforced with tanks and artillery), an echelon for developing the penetration (a mechanized corps, cavalry, and motorized infantry), and an aviation group.[47] The art of conducting an operation began to consist of the fact that the actions of strike, holding, and feint groups, as well as those of penetration echelons, echelons for developing the penetration, and aviation, while tactically not interconnected, were consolidated along the front and in the depth, on the ground and in the air, into a strike mechanism which would provide a single, purposeful, and uninterrupted action against the enemy's operational grouping until he was completely routed.

An extremely important role in the development of a correct methodological approach to studying operations based on a Marxist-Leninist understanding of the specific nature of armed combat, belongs to V. K. Triandafillov. He was the first to attach important significance to the study of the nature of operations in

political-economic, materiel-technical, operational-tactical, and strategic respects. Therefore, it is not by chance that he called his eminent work *Kharakter operatsiy sovremennykh armiy* [The nature of operations of modern armies]."The book influenced many minds," wrote the editorial preface to the second edition, "and changed the conventional thinking of very many operational workers."[48]

Triandafillov's enormous merit consists also of the fact that he correctly posed the question on the necessity of basing the art of conducting operations not on the "intuition" and "feeling" of the military leader, but on a specific calculation of forces and means with respect to time and space. "Operational art," he wrote, "not only should, but can, give way to a certain calculation foundation."[49]

Stating that operational art does not exist outside specific norms, Triandafillov was far from the sense of "viewing operational art as a type of bookkeeping . . . "[50] In his opinion the art consisted of correctly taking into account the operational significance of all, usually changeable, elements of the situation, correctly determining those forces and means which were necessary for resolving a given concrete mission, and properly distributing them to formations [*soyedineniye*] and large formations [*ob"yedineniye*].

The theory of deep operations was developed for the first time in the Soviet Union. In the middle of the 1930s not a single army in the world had a military theory so completely developed as did our Soviet Army. It corresponded to the nature of a future great war as a conflict between massive armies, abundantly outfitted with the latest technical assets, the use of which on a operational scale would be expedient only in the form of a deep operation. In connection with the unjustified repressions of 1937-1938, many tenets of the theory of deep operations were questioned, inasmuch as military figures subject to the repressions actively participated in its development.

In essence, our thinking was turned back to linear forms of armed combat on an operational scale as a result of this circumstance, and also as a result of the incorrect conclusions drawn from the experience of the limited war in Spain in 1936-1939, the implementation of which led to the disbanding of mechanized corps in 1939, the limitation of aviation to a tactical framework of actions on the battlefield, etc.

Thus, the highest achievement of our miliary-theoretical thought was temporarily consigned to oblivion. The experience of the first year of World War II demonstrated that the Germans most fundamentally and successfully were using our scientific achievements in the field of the theory of operational art. We began to quickly reexamine our views and introduce serious changes into the organizational force structure. But there was little time. Soon the Great Patriotic War began. Enormous efforts were required to eliminate these tremendous shortcomings.

In complete contradiction to historical truth, German Field Marshal Erich von Manstein states that in the course of the war the Soviet command seemed to learn from the Germans the expedient organization of tanks into tank and mechanized corps and simultaneously adopted the German method of deep penetration.[51] Although we are not able to deal with this issue in detail, we point out the following.

It is known that the main source for judgement on operational-tactical procedures of one army or another is usually their regulations. The German regulations, *Troop Leadership*, adopted in 1933, contained not a hint of deep battle or operations in the sense in which these were treated in the book by Soviet researcher G. S. Isserson, *Evolyutsiya operativnogo iskusstva* [The evolution of operational art], which appeared in autumn 1932, as well as in the lectures on tactics given that year in the operations department of the Frunze Military Academy.

Because of its original posing of the question on new forms of armed combat on an operational scale, Isserson's book attracted the attention of German military researchers. Thus, in the journal *Militaer Wochenblatt* in the article "A Modern Genghis Khan," published in 1935, the novelty of the ideas stated in Isserson's book was pointed out, and it was recommended to regard them in all seriousness; moreover, it was indicated that Soviet industry could support these ideas with appropriate armaments. It must be said that beginning in the 30s and especially after the publication in 1936 of the new *Field Regulations of the Soviet Army*, in which the fundamentals of deep tactics were expounded, German military thought took in Soviet ideas of new forms of armed combat. One could find them, for example, in the works of German Generals Ludwig, Ehrfurt, and others. Most characteristic was the work of General-Lieutenant Tausen, *Problems of the Tactical and Operational Use of Tanks*, published in 1939. In it the issues of penetration of the enemy front by all modern combat arms,

and of throwing into the penetration large tank and motorized formations to completely crush the enemy being attacked were examined.[52]

Thus, the theory of operational art in the Soviet Army was naturally assigned to an independent branch of military knowledge. Its history is the systematic, thorough, and multi-sided study of the uninterruptedly developing social and materiel-technical base and military thought of both the Soviet Army and the armies of probable enemies. Investigation of these issues was conducted in order to determine in a timely fashion in what direction and how the development of the theory of operations could proceed, what would be its ideological content, and which tasks would be the major and decisive ones for it. The creators of the theory of operational art (Tukhachevsky, Triandafillov, et al.) attempted to bring to light and master the new axioms of war, creatively develop corresponding ways and means of destroying enemy armed forces in a TVD, i.e., in *front* and army operations, systematically verify theoretical tenets already developed, and replace the obsolete with the new. The scientific or progressive nature of one or another theory of operations is usually judged according to how much its prognoses are justified, while the forms and methods developed by it for conducting operations passed a practical verification in war. Despite some inadequacies (insufficient development of the operational defense, especially the withdrawal), the theory of operational art of the Soviet Army passed the test of the Great Patriotic War and continues to be enriched by new tenets corresponding to modern conditions.

ENDNOTES

1. *Voyenno-istoricheskiy zhurnal* [Military-historical journal], 3 (March 1962), pp.26—40.
2. V. A. Semenov, *Kratkiy ocherk razvitiya sovetskogo operativnogo iskusstva* [A brief essay on Soviet operational art] (Moscow: Voyenizdat, 1960).
3. *Grazhdanskaya voyna. Sbornik I. Soobshcheniya po strategii grazhdanskoy voyny, chitannyye sotrudnikami shtaba 5-y armii. Inspektsiya voyenno-uchebnogo otdela 5-y armii Vostochnogo fronta, 1919; Tekhnika vedeniya operatsiy. Zapadnyy front, 1920; Boyevoye primeneniye strelkovoy divizii i vysshikh kavaleriyskikh soyedineniy* [The civil war. Collection I. Reports on the strategy of the civil war given by workers of 5th Army Headquarters. Inspection of the military-academic department of the 5th Army of the Eastern Front, 1919; Techniques of conducting operations. Western Front, 1920; Combat use of a rifle division and higher cavalry formations] This work is in the personal library of V. I. Lenin in the Kremlin. On the title page of the book is the inscription "Copy of V. Lenin, 24 April 1920".
4. S. Kamenev, *Ocherednyye voyennyye voprosy* [Latest military issues] (Moscow: VVRS, 1922); M. Tukhachevsky, *Voprosy vysshego komandovaniya* [Problems of the higher command] (Moscow: 1924); M. Tukhachevsky, *Pokhod za Vislu* [Campaign for the Vistula] (Smolensk: 1923); A. Neznamov, *Sovremennaya voyna* [Modern war] (parts 1 and 2) (Moscow: Gosizdat 1921-1922); A. Verkhovsky, *Obshchaya taktika* [General tactics] (parts 1 and 2) (Moscow: VVRS, 1922); M. Batorsky, *Podgotovka plana voyny i operatsii* [Preparation of a plan for war and operations] (Izdatel 'stvo upravleniya VUZ. Zapadnogo fronta, 1921); N. Varfolomeyev, *Tekhnika shtabnoy sluzhby* [Techniques of staff service] (Moscow: VVRS, 1924); N. Shvarts, *Ustroystvo voyennogo upravelniya* [Setting up military control] (Moscow-Leningrad: Gosizdat, 1927).
5. B. Barsky, *Organizatsiya i upravelniye tylom* [Organization and control of the rear] (Moscow: Gosvoyenizdat, 1926); N. Suleyman, *Tyl i snabzheniye deystvuyushchey armii* [Rear and supply of an active army] (parts 1 and 2) (Leningrad: Gosizdat, 1927).
6. A. Svechin, *Evolyutsiya voyennogo iskusstva* [Evolution of military art] (vols 1 and 2) (Moscow-Leningrad: Gosizdat, 1927-1928); V. Novitsky, *Mirovaya voyna* [The world war] (Giz: 1928); A. Zayonchkovsky, *Mirovaya voyna. Manevrennyy period 1914-1915 godov na russkom (evropeyskom) teatre* [The world war. Maneuver period of 1914-1915 on the Russian (European) theater] (Moscow-Leningrad: Giz, 1929); A. Bazarevsky, *Mirovaya voyna 1914-1918* [The world war 1914-1918] (Moscow-Leningrad: Giz 1927); N. Kapustin, *Operativnoye iskusstvo v pozitsionnoy voyne* [Operational art in a positional war] (Giz 1927); N. Kakurin, *Kak srazha' 's' revolyutsiya* [How the revolution was fought] (vols 1 and 2) (Moscow-Leningrad: Gosizdat 1925-1926); N. Ye Kakurin and V. A. Melikov, *Voyna s belopolyakami 1920* [War with the White Poles, 1920] (Moscow: Gosvoyenizdat, 1925); V. Melikov, *Marna—1914 goda. Visla—1920 goda. Smirna—1922 goda* [The Marne—1914. The Vistula—1920. Smirna—1922] (Moscow-Leningrad: Giz, 1928).
7. E. Ludendorf, *My Recollections of the War 1914-1918 (vols 1 and 2)* (Moscow: Gosizdat 1923-1924); E. Falkenhein, *The Supreme Command 1914-1916 in its Most Important Decisions* (Moscow: VVRS, 1923); F. Kuhlman, *Strategiya* [Strategy], (Giz 1927)
8. K. Clausewitz, Fundamental Tenets on the Study of War (The Most Important Principles of the Conduct of War) (Moscow: Voyennyy Vestnik, 1923); *Principles of Strategic Decision* (Moscow: VVRS, 1924).
9. *Strategiya v trudakh voyennykh klassikov* [Strategy in the works of military classics], Vol 1 (Moscow: VVRS, 1924) (in this were extracts from the works of Lloyd, Napoleon, Medem, Vilizen, Leval, Verdi du Vernois, von der Holtz, Foch, Schlieffin) vol 2, (Voyenizdat, 1926) (in this were extracts from the works of Bulow, Archduke Karl, Jomini, Moltke, Scherf, Leer).
10. *The Civil War, Collection 1. Reports on Strategy*, p. 50.
11. Translator's note: *teatr voyennykh deystviy* is sometimes translated as "theater of military operations," "theater of military activities" "theater of military actions," "theater of strategic military actions." For the sake of continuity I will use the abbreviation TVD throughout.
12. N. Ye Varfolomeyev, *Konspekt lektsiy po operativnomu iskusstvu* [Conspectus of lectures on operational art] (Frunze Military Academy, 1928), p.3.
13. A. Svechin, *Strategiya* [Strategy] (Moscow: Voyenriyy vestnik), 1927, p. 15.
14. Ibid., p. 200.

15. A. Neznamov, *Sovremennaya voyna* [Modern war] (SPB, 1912) p.10.
16. The first compulsory military conscription was introduced in Prussia in 1813, in Austro-Hungary in 1868, in France and Japan in 1872, and in Russia in 1874.
17. The result of introducing compulsory military service and the shift of armies to a cadre system was clearly obvious in the example of Russia. In two centuries, from 1700-1900, Russia conducted 35 wars, which covered a total of 128 years, in which 9810 soldiers participated. By 1 August 1914 its cadre army numbered 14,375 men; in all, the army numbered 15,978 fighting men. Thus, in the three years of the first world war the number of men engaged in battle was almost two times greater than in the 128 years of war mentioned above.
18. In 1812 the French and Russian armies met at Borodino on a front of 6-8 kilometers; in 1914, the French and German armies deployed on a front of 340 kilometers, while the Russian army deployed at that time against the German and Austro-Hungarian armies on a front of 1057 kilometers.
19. N. N. Golovin, *Vvedeniye v kurs taktiki* [Introduction to a course in tactics] (SPB, 1911), p. 9.
20. V. V. Marushevsky, *Upravleniye voyskami na teatre voyny i na pole srazheniya* [Troop control in a theater of war and on the battlefield] (SPB, 1912), p. 124.
21. A *front*, as a higher formation *(ob"yedineniye)* of armed forces on a theater of military actions, was created in Russia for the first time in 1900 in the plan for strategic deployment of the Russian army against Germany and Austro-Hungary.
22. A. A. Svechin (1879-1941)— general-major of the Russian army, in the Red Army from 1918. He was the military leader of the Western Screen (Front), chief of the All-Russian Main Staff, chairman of the military-historical commission, professor in the Department of Strategy, War History, and Military Art at the Frunze Military Academy.
23. The journal *Krasnyye zori* [Red Dawns]. 11 (1924), p. 23.
24. K. Berends, *Strategicheskiye vekhi* [Strategic landmarks] (Moscow: Frunze Military Academy, 1925), p. 52, 61.
25. M. V. Frunze, *Izbrannyye proizvedeniya* [Selected works] Vol. 2 (Moscow: Voyenizdat, 1957), p. 35.
26. M. Tukhachevsky, *Voyna. Sbornik Voyennoy akademii RKKA im Frunze* [War. Collection of the Funze Military Academy of the *RKKA*], book 1, 1926, p. 1.
27. A. Golubev, *M. V. Frunze o kharaktere budushchey voyne* [M.V. Frunze on the nature of future war] (Moscow: Gosvoyenizdat, 1931), p. 8. Golubev is now a colonel (retired), member of the CPSU since 1917. On the eve of the Great Patriotic War he headed the department of operational art at the Higher Military Academy.
28. Tukhachevsky, *War*, p. IV.
29. Ibid. Tukhachevsky not only came forth with a suggestion for the creation of a "science concerning war," but soon after set about developing it in a monograph entitled *Novyye voprosy o voyne* [New issues concerning war]; see *Voyenno-istoricheskiy zhurnal* [Military-historical journal], 2 (1962).
30. From the Greek 'polemos'—"war" and 'strategiya'—"troop leadership."
31. Svechin, *Strategy*, p. 200.
32. A. V. Golubev, *Voprosy frontovoy i armeyskoy operatsii* [Questions on the *front* and army operation] (Moscow: Military Academy For Tank Troops) 1940, pp. 5—6
33. N. Varfolomeyev, *Strategiya v akademicheskoy postanovke* [Strategy in an academic formulation] in *Voyna i revolyutsiya* [War and revolution] 11 (1928), p. 84. N. Ye Varfolomeyev (1890-1941), staff-captain in the old Russian army; in the Red Army from 1918. He held the posts of chief of army staff, deputy chief of *front* staff, deputy chief of the strategy cycle at the Frunze Military Academy of the *RKKA*, and district chief of staff.
34. V. Melikov, *Problema strategicheskogo razvertyvaniya* [The problem of strategic deployment], vol 1 (Moscow: Frunze Military Academy, 1935), p. 32.
35. *Vyssheye komandovaniye* [Higher command] (Moscow: VVRS, 1924), p. 3.
36. In the concept of "operation support technique" are included reconnaissance, security (mainly the Air Defense of the area of the operation), engineer support, communications, military communications, supply, outfitting, and medical and veterinary services. In the guide *Higher Command* it is emphasized that operation support techniques "are the basis of strategic maneuver," (p. 6) and that they should "have specific no ms and permanent methods" (p. 4).
37. March-maneuver is the movement of an army from landing points toward the enemy, or any shift of several large formations.
38. G. Girs, *Zadachi nauki i voyennaya doktrina v svyazi s perezhivayemoy nami revolyutsionnoy epokhoy* [The tasks of science and military doctrine in connection with the revolutionary epoch which we are experiencing], book 1, 1921, pp. 50—51.
39. Tukhachevsky, *Problems of modern strategy*, p. 19, 20.
40. *Grazhdanskaya voyna*/[The civil war], collection 1, p. 34, 35.
41. Tukhachevsky, *Problems of modern strategy*, p. 20.
42. Ibid., p. 11.
43. M. N. Tukhachevsky, *O kharaktere sovremennykh voyn v svete resheniy VI kongressa Kominterna* [On the nature of modern wars in light of the decisions of the VI Comintern Congress], notes, Vol. 1 (Komakademiya, 1930), p. 20.
44. *XV let Krasnoznamennoy Voyennoy akademii RKKA im. M.V. Frunze (1918-1933)* [Fifteen years of the Red Banner Frunze Military Academy of the *RKKA* (1918-1933)], 1934.
45. N. Varfolomeyev, *Udarnaya armiya* [The shock army] (Moscow: Voyenizdat, 1933), p. 178.
46. Anglo-Franco-American troops in the four months of the offensive in 1918 advanced 100 kilometers.
47. Several mechanized corps could form a motor-mechanized army, and a formation of mechanized corps with cavalry—a mounted-mechanized army or group.
48. V. Triandafillov, *The Nature of Operations of Modern Armies*, p. 11.
49. Ibid., p. 224.
50. Ibid., p. 225.
51. Erick von Manstein, *Verlorene Siege* [Lost victories] (Bonn, 1955).
52. *Voyennyy zarubezhnik* [Military foreigner], 8 (1939).

TACTICS AND OPERATIONAL ART OF THE WORKERS' AND PEASANTS' RED ARMY AT A NEW STAGE[1]

A. I. Yegorov

The theses of the speech by Marshal of the Soviet Union A. I. Yegorov, published for the first time by the editorial staff in abbreviated form, is of considerable interest. In it are summed up the results of scientific-theoretical research carried out in the Red Army at the beginning of the 1930s, connected with the technical reconstruction of the armed forces.

Although the theses of the report are called *Taktika i operativnoye iskusstvo RKKA na novom etape* [Tactics and operational art of the *RKKA* [Workers' and Peasants' Red Army] at a new stage], their content encompasses a number of issues of strategy. In particular, issues such as strategic deployment, views on the nature of the initial period of a future war, views on the use of types of armed forces, and other matters are raised in the theses.

The history of the creation of this document is interesting.

The outfitting of the army and navy with new combat equipment pointedly posed the question of the paths for further development of the armed forces and of the creation of a military theory which responded to the requirements of the technical reconstruction of the *RKKA*. In view of the urgency and importance of this matter, the USSR Revolutionary Military Council [*RVS SSSR*] in its meeting of 11 March 1932 charged the *RKKA* staff with the development of a report on the operational-tactical problems connected with the reconstruction of the *RKKA*. On 20 April 1932 the *RVS* heard the preliminary observations of A. I. Yegorov on the issue and decided on a special meeting for 20 May to examine the final version of the report. The chief of staff of the *RKKA* was assigned to fully work out by this time the theses of the report and distribute them to all members of the *RVS SSSR*.

At the beginning of July, the theses of the report were distributed to the commanders of military districts, deputy people's commissars, and chiefs of military academies. In comments which were received, the basic tenets of the theses were approved. The former (at that time) commander of troops of the Ukrainian Military District, I. E. Yakir, wrote that in the theses of the report a number of new tenets in the field of tactics and operational art were raised in a completely timely fashion in connection with the widespread introduction into the army of motorization and the development of aviation. He proposed to conduct a number of exercises and games for the practical verification of the theoretical tenets formulated in the theses of the report.

The commander of troops of the Leningrad Military District, I. P. Belov, in analyzing the content of the stated tenets on strategy, indicated that they were a new contribution to the development of Soviet military doctrine. The former (at that time) chief of combat preparation of the *RKKA*, A. I. Sedyakin, also warmly supported the theses of the report. In a letter to Yegorov he wrote that he fully shared the basic positions on tactical and operational art which were stated in the theses of the *RVS* report.

The theses of the report, opinions, and observations were used to develop the *Vremennyye ukazaniya po organizatsii glubokogo boya* [Temporary instructions for organizing deep battle], which were sent to the troops as an official manual in 1933.

The ideas stated in the theses of the report are of great scientific interest. It should be taken into account that the theses of the report were written in the first half of 1932, i.e., at the dawn of the mechanization and motorization of the Soviet Army, when not a single army yet had experience in using large masses of armored and mechanized forces or massive use of aviation with qualitatively new aircraft combat features.

This was a turning point, when many tenets of military art which were stated after World War I were recognized as obsolete; searches for new forms of conducting operations and battles corresponding to the new level of development of armed forces were carried out. At that time the old views which relied on the experience of World War I and the Civil War were still unusually tenacious. They exerted considerable influence on the development of military theory. Therefore, in the published theses of the report, together with bold and correct conclusions which flowed out of the qualitative and quantitative development of the armed forces, there also were erroneous tenets obsolete for that time, on the nature of conducting armed struggle and the role of combat arms.

On the basis of an analysis of the development of the armed forces after World War I, new content was put into the concept—the initial period of war. This was not a period of passive cover of mobilization and strategic concentration and deployment of armed forces, but one of dynamic activities with far-reaching goals. In the theses of the report, the possible nature of troop activities in this period was stated. The experience of World War II basically confirmed the correctness of the tenets which were advanced in this document.

Together with this, several issues on the conduct of combat operations in the initial period of war were subject to subsequent rewording. The experience of strategic games and exercises conducted in the 1930s demonstrated that invasion groups were not able to fulfill those missions which were assigned to them in the first strategic stage of the struggle. They were weak with respect to composition, and were directed toward operations along isolated directions, which could lead to their subsequent routing by the enemy. Instead of groups, initially the creation of invasion armies or shock armies was indicated; then it was acknowledged as necessary to assign the fulfillment of the missions of the invasion armies to the entire first strategic echelon of the armed forces.

After a brief summary of opinions on the nature of the initial period of war, individual problems of strategic concentration of the Soviet Armed Forces were examined in the theses. A special place in the theses of the report was given to an analysis of the nature of operations which would take place in future wars and also of the place and role in them of types of armed forces and combat arms. A reevaluation of the role of cavalry was noted in the theses, although the broad introduction of automatic weapons into the forces and the development of aviation already in World War I had led to a significant reduction in the role of cavalry in battle and operation. With the appearance, then, of tanks and the transformation of aviation into an independent branch of the armed forces, the significance of cavalry as a strike force of the army in essence was reduced to naught.

Increased demands for troop control were emphasized in the theses, and it was mentioned that "the new form of operation requires broad use of radio, aircraft, communications, and combat vehicles (on a tank chassis)," i.e., radio and mobile means of communication occupied first place. The Great Patriotic War confirmed the viability of these demands.

In working out tactical issues, of which in the published material only a section on the meeting engagement was inserted, the sequence of using aviation and armored troops in the offensive, with a penetration of the enemy defense on its entire depth, was particularly examined in the theses of the report.

A model plan of operations for tanks jointly with combined arms formations was presented in the following manner. After the artillery preparation, operations were begun by long-range tanks as an asset of the commander of a rifle corps or division. This tank group was to suppress artillery in the depth of the enemy deployment, control points, and reserves. Following these, long-range support tanks went into the attack as an asset of the division or regimental commander; these were to suppress the fire assets of enemy infantry in the depth of the defense. Finally, direct infantry support tanks as an asset of the rifle company commander followed directly with the infantry. Each rifle corps in the offensive battle was reinforced by one brigade and two-three tank battalions of the Reserves of the High Command (*RGK*). However, combat operations which were necessary for Soviet Army troops to conduct at the end of the 1930s forced a reexamination of this plan for using tanks.

The increased density of antitank assets in the defense made it impossible for long-range tanks to operate independently in the deep enemy deployment. Being of no use, long-range and long-range infantry support tanks in the majority of cases suffered great and unwarranted losses.

Increased artillery range and the creation of light and assault aviation made it possible to suppress more effectively and reliably the tactical zone of defense on its entire depth. Therefore, with the beginning of the Great Patriotic War, only direct infantry support tank groups were created for cooperation with infantry.

The theses of the report ended with conclusions in which the opinions of Soviet military theory of the beginning of the 1930s on the conduct of battles and operations and on the organizational principles of the development of the Soviet Armed Forces were concisely reflected.

The publication of the theses of A. I. Yegorov's report open yet another page in the history of the development of Soviet military theory.

The published document is kept in the Central State Archive of the Soviet Army.

I. INTRODUCTION

1. The plan, accepted by the *RVS* for the development of Air Forces and mechanized units, and the introduction of mechanization and motorization into rifle and cavalry units and formations in the next 1-2 years not only radically change the organizational structure of the *RKKA*, but also pose a number of new problems of a strategic and operational-tactical order.

2. In 1933 we will have powerful formations such as aviation and mechanized corps. With respect to means of suppression, we can support a strike group of corps and several shock armies by considerable additional means of attack (aviation, tanks, artillery, etc.), which make it possible to pose the problem of the nature of the battle and operation in a new way.

II. TACTICAL ISSUES

1. At the given stage of the development of the *RKKA*, in the face of the saturation of troops with the newest technical means of combat and control, a whole series of tactical issues (the offense, defense, pursuit, etc.) acquires a completely different nature of activity.

Modern means of destruction, on the strength of their great power (aviation, Armies of the Reserve of the High Command/*ARGK*), rapid movement (tanks, aviation), and range, make it possible to strike the enemy simultaneously on the entire depth of his deployment, as different from present forms of battle and attack, which can be characterized as successive suppression of individual elements of the battle formation.

These assets are used so as to paralyze the fire of all means of the defense, independent of the depth of their deployment, isolate one part of the enemy from the other, disrupt cooperation between them, and destroy them piecemeal.

The following should be attached to troop formations to inflict a strike and produce an attack against the entire depth of the enemy battle deployment:

a. aviation—to suppress artillery and rout the reserves;

b. additional artillery—to suppress infantry and infantry fire assets, the antitank defense, and artillery;

c. tanks—to suppress infantry fire assets and artillery, and to rout the . . .

Meeting Engagement. The presence of a large number of tanks, artillery, and aviation is undoubtedly reflected in the nature of the meeting engagement as well. There is the possibility of having in the advance guard stronger artillery support, approximately three-four artillery battalions per rifle regiment (not including regimental artillery), tanks for accompanying infantry, and approximately one battalion per rifle regiment. Taken together, this reinforces to a higher degree the offensive strength of the advance guard and makes it possible for it to achieve the outcome more rapidly against enemy security units.

The presence of combat aviation and fast-moving tanks makes it possible for the chief of a column to produce the first effects against the enemy by means of these longer-range and faster-moving assets.

Aviation initiates the battle. It produces the first attacks against the enemy. By means of its activities it can upset the columns of the enemy's main forces, isolate one column from the others, and isolate the advance guard from the main forces of the column. This is achieved by repeated actions conducted by individual detachments or squadrons.

In all probability, fast-moving tanks will be put into action immediately after the deployment of the advance guard's artillery, so that their actions can be supported by sufficiently strong artillery.

The object of the activity of both artillery and fast-moving tanks should be one and the same, i.e., breaking up the enemy march formation: deploying enemy artillery, individual battalions or regiments still located in the column or already moving in open formations. Usually artillery takes these objects of activity under concentrated fire, while fast-moving tanks attack and annihilate them from the flanks and the rear. Aviation is enlisted for repeated strikes either against the same targets or against neighboring ones, so as to isolate the objects being attacked.

An attack by fast-moving tanks against individual elements of the march formation will precede the main forces of the advance guard's shift to the offensive for the reason that the infantry physically cannot manage to deploy simultaneously with tanks; to surrender the opportunity to attack the enemy while the infantry is located in a column would be a mistake.

The advance guard, under cover of these actions, swiftly deploys and with its accompaniment tanks attacks the enemy's security units.

Regiments of the column of the main forces with accompaniment tanks attached to them will be located in this period at a stage of approach and along column roads, or they will arrive at the deployment area dispersed along individual approaches. Their final direction for the attack should be determined in accordance with the results which have been achieved by the activities of aviation, tanks, artillery, and the advance guard as a whole until the moment of the arrival of these tanks at the deployment area.

All column forces, all infantry, artillery, all tanks, including those which until this time took part in one-two attacks, and all aviation should participate in this general new phase of the meeting engagement. This strike by neighboring forces is organized as an advance against a defending enemy (with long-range, long-range infantry support, and direct infantry support tanks and *desant* detachments thrown into the enemy's rear area), and should lead to a complete rout of the enemy.

Issues of control here are most new and formidable.

Reliable and uninterrupted communications with airfield aviation obviously is required; such communications can be supported on the march only with the help of radios and aviettes,[2] and duplicated by motor vehicles.

Reliable communications are required between ground and air forces, between command on the ground and air forces in the air; obviously, here only radio can provide control. All means of communications will find a place in the organization of communications between command, tanks, artillery, and infantry. With tanks engaged in battle, communications is by radio and by means of combat vehicles (small tanks, armored vehicles).

A broad network of command observation posts with responsible staff workers for observing troop activities on the entire front and entire depth is required. In all probability, this will not be successful without special observation aircraft with radio stations for reception and transmission mounted on them. Special command combat vehicles, which are sent with tank echelons together with communications delegates, can help . . .

III. OPERATIONAL ISSUES

1. New means of armed conflict (aviation, mechanized, and motorized formations, modernized cavalry, air assaults, etc.) and their qualitative and quantitative growth are raising issues concerning the initial period of war and the nature of modern operations in a new way.

2. *Initial Period of War*. The opposing sides will attempt as early as possible, with the help of methods of covert mobilization, to amass more quickly these forces and means, with the help of which enemy territory can be invaded, and enemy mobilization in border areas and concentration of forces can be forestalled.

All combat aviation, mechanized units, and mounted masses will be used for this . . .

It is impossible to determine precisely the nature of the initial operations, but operational landmarks can and must be laid.

Aviation, by means of activities from the air and landings of air assaults in conjunction with diversionary acts from within, can hinder railroad transport at a depth of 400-600 kilometers, inflict considerable damage on enemy air and naval forces, and destroy the most important supply depots and bases which supply his army.

Large mechanized units interacting with mounted masses and aviation, supported in the first days of border engagements by infantry units, break through into enemy territory.

The primary goals of invasion groups are the following:

a. destroying covering units;

b. thwarting mobilization and new formations in border areas;

c. capturing and annihilating enemy reserves which have been formed for the conduct of war, and holding areas of operational significance, indicated in the mission as one of the primary goals of the deep invasion into enemy territory;

d. forcing the enemy to withdraw the deployment deeply into the rear area.

The depth of penetration of invasion groups will be determined by the correlation of forces at the moment of the invasion, the distance to the largest water barriers, the fortification of areas and calculations of provisions . . .

However, it is necessary to consider that the invasion groups will be able to create only a number of crises and inflict a number of strikes against the covering armies, but will not be able to resolve the issue of concluding the war or delivering a decisive strike against the main forces. This is the mission of the subsequent period of operations, when the operational concentration will be completed.

3. *Problem of Concentration.* Two primary factors determine the situation of the initial concentration:

a. aviation, the location of which is dependent on its quantitative and qualitative state;

b. the presence of mechanized formations, which combine great shock and fire power with great mobility.

These data are reflected in the following way in the process of the initial concentration of the RKKA.

Enemy aviation, by means of activities from the air and landings of *desant* groups, can actively hinder transportation at a depth of up to 600-800 kilometers (Moscow-Khar'kov meridian), forcing maneuver along the railroads both in bypassing the destroyed sectors and changing the direction of flow and areas of concentration.

Large mechanized units interacting with cavalry can interfere with the transportation and concentration of the *RKKA* by means of ground operations.

Under our conditions, in the presence of river lines along the border (Dnestr, Sluch) and a number of fortified areas, the danger of disrupting railroad transportation and deployment of the *RKKA* by ground forces troop activity is insignificant. With the reinforcement of fortified areas by garrisons in peacetime and by antitank defense, this danger can be eliminated

The primary and sole threat to the plan for railroad transport, and together with this to the plan of deployment by the first operation, will be from enemy aviation.

In connection with this planning, control, and support of the process of concentration, as distinct from a world war, obtains a special character. These features are reduced to the following:

a. the plan of railroad transportation should be flexible, allowing the possibility for change of the flow in bypassing a destroyed sector in case of disruption of movement on one railroad axis;

b. it is necessary to pose in a new way the problem about reserves and the location of assets necessary for reestablishing destroyed sectors of the railroad. These assets should be concentrated in peacetime at railroad centers and other points of probable enemy attack (in the vicinity of railroad bridges, railroad sidings, and unloading stations).

The primary guarantee of the capability for uninterrupted fulfillment of the plan for concentration is the presence of a powerful air fleet, air defense assets, powerful mechanized groups, and mounted units which have been appropriately placed in peacetime. Control of the concentration process within the limits of primary trends and ideas should be centralized. Thus, the following are tasks for the High Command:

a. control of railroad maneuver;

b. maneuver by means of changing points and periods of time for loading units (outside of the zone of control of *front* command);

c. maneuver of reserves of assets for restoring the railroad;

d. change of lines of concentration and deployment;

e. change of groupings by means of redistribution of forces between fronts . . .

4. *Nature of Modern Operations.* The modern operation will consist of combat activities proceeding on a large expanse, both along the front and in the depth.

The depth of a modern operation will depend on the depth of the operational deployment of the enemy, which will reach 100-120 kilometers, taking into account as well reserves which are maneuvering with the help of vehicular transport, airfields with aviation (including heavy) deployed on them, distribution railroad stations with reserves of combat goods, etc.

The penetration of such a deployment presently is connected with great difficulties and a great expenditure of time. This is conditioned by the fact that :

a. the tactical stability of the defense in connection with the presence of a large number of infantry machine guns is so great that the rate of the advance from the front is very slow. It is considered that on the average, with battles, 8-10 kilometers can be covered on the day of an operation, and only as a maximum will this reach 12 kilometers;

b. the presence of reserves in the rear, and the ability to maneuver by vehicular transport and railroads make it possible to bring forward new forces into the area relatively swiftly; these can easily enough cover the breach which has been formed.

Imperialist war knows many instances of the penetration of the enemy's defensive zone, but these penetrations amount to the tactical breakthrough of a front. The development of efforts in the depth for the purpose of transforming tactical success into an operational achievement did not take place. The reason for this is discovered in the absence of mobile operational echelons capable of developing the penetration, annihilating approaching reserves on its path, disrupting the control and supply system, etc. Operational art of the imperialist war did not demonstrate the ability to implement an operational penetration (on the Western Front).

In order to transform a tactical penetration into an operational breakthrough of the entire enemy defensive zone, it is necessary not only to attain a higher rate of development of the offensive from the front (which is now achieved with the help of tanks, artillery, aviation, and motorization of rear areas), but also to find means which would make it possible, simultaneously with a strike from the front, to attack enemy reserves, his aviation, and supply units even more deeply, and to deprive him of the ability to broadly maneuver both these reserves and those new troops which can arrive by railroad or with the help of vehicular transport. Means are needed which would make it possible to create heavy traffic congestion in the enemy rear area, thus cutting off the path of enemy withdrawal; this would lead to his complete tactical "encirclement."

These capabilities are opened by the following:

a. correct operational use of current (modernized) strategic cavalry;

b. appearance of new means making it possible to penetrate swiftly into the enemy rear area—large motorized and mechanized troop formations (mechanized corps, mechanized brigades, and motorized divisions);

c. large-scale development of combat aviation, which has obtained, thanks to this, the capability of powerful and extended action against objects located in the deep rear area of the enemy;

d. prospects of wide use of air assaults in the deep rear area of the enemy . . .

6. *Organization of the Operation on the Decisive Direction.*[3] The central issue in the organization of an operation on the decisive direction (shock army) and its planning is the correct combination of strike from the front with strikes along the depth of the enemy's operational deployment. This combination of strikes should lead to a possibly swift breakthrough of the entire enemy front, and encirclement and annihilation of his forces which are occupying the sector of the front being attacked, as a result of which a new capability should be opened—the development of decisive operations on the flank and in the rear area of troops occupying the remaining sectors of the enemy front.

In organizing an operation, when directing the troops it is necessary to strive so that at the end of the first, or in the extreme case at the beginning of the second day of the operation, ground forces attack the depth of the

enemy' s operational deployment, the overcoming of which would lead to a complete breakthrough of the enemy front. This depth usually will be determined by the area of deployment of his army reserves and heavy-aviation airfields. This is achieved roughly by the following plan for organizing the strike.

With the disruption of the enemy's system of defense (upon penetration by infantry 6-10 kilometers into the enemy's deployment), the following are thrust forward:

a. mechanized units (mechanized corps, brigades) in combination with aviation and air assaults to attack the deepest objectives (supply stations, rear lines, etc.), army reserves, airfields, heavy aviation, etc.

The depth of the penetration in the first 24 hours is as much as 80-100 kilometers. Mechanized units, in advancing into the deep rear area of the enemy to the indicated object, annihilate approaching reserves, withdrawing units and transports on their path;

b. cavalry, with aviation support, to attack reserves and light aviation airfields which are not as deep, and to destroy withdrawing logistic support elements. The depth of penetration in the first 24 hours is up to 50-60 kilometers;

c. motorized units sent to destroy reserves approaching or being transferred into the area of the penetration, or to operate along the rear areas of sectors which are not being attacked, for the purpose of widening the penetration. Heavy and light bomber aviation attack railroad centers (destroy them) on major lines which lead to the area of the penetration for the purpose of preventing the supply of reserves from the depth of the country. The depth of operation is up to 400 kilometers . . .

Further attack occurs simultaneously from the front and rear until full tactical encirclement is achieved.

From the commencement of enemy withdrawal, the army goes over to the pursuit. Here, mechanized units and cavalry pursue along parallel roads.

To organize such a strike, the army combat formation is structured in the following way:

a. in front are the rifle corps, with a depth of combat deployment of up to 6-8 kilometers;

b. behind, on the directions of the main strike of the army, are the mechanized units and cavalry, ready to be thrust forward;

c. aviation is echeloned as follows: light combat aviation from 40-60 kilometers, and heavy aviation from 80-200 kilometers.

7. *Control.* Control of a modern strike grouping is complicated by the following facts:

a. various units being sent into the enemy's rear area require that their activity be closely coordinated among themselves, not only at the commencement, but also in the process of the very operation and in the first period of activity, as in a corps. The army commander should provide a timetable by which combat operations of all units are coordinated on the entire depth of the battle;

b. the great separation of forces being sent into the enemy's rear area makes it difficult to provide uninterrupted communications with these troops and to supply them.

Therefore, the new form of operation requires broad use of radio, communications aircraft, and combat vehicles (on a tank chassis).

The use of code should be simplified and introduced into the army so that it can also be used in normal conversation.

Control in a modern operation is organized proceeding from the prerequisite that command of all units attacking one and the same object is unified in the same hands. Mechanized formations, airborne-motorized *desants*, and aviation operating against deep enemy objects are linked by the commander of the mechanized corps.

Strategic cavalry and aviation operating against the enemy's administrative rear area are subordinate to the commander of the cavalry group or the commander of the cavalry army.[4] All units attacking objects in the rear should not be connected by demarcation lines.

At the beginning of the operation, aviation functions according to the direct task of the commander of the army, and with the beginning of the advance of mechanized and cavalry units it is attached to the latter at the prerogative of aviation groups . . .

IV. AIR FORCE

1. The modern development and state of aviation equipment and the country's powerful aviation base which has been created provide for the rapid growth of our air force.

Our air force has come right up to a new stage of its development, which, on the basis of increasing combat significance, requires new points of departure in using both individual types of aviation and the Air Forces as a whole.

2. In the first period of the war, all available combat aviation (including naval and army) is massed for independent operation in implementing superiority in the air, disorganizing the rear, disrupting mobilization, concentrating the army, and destroying enemy naval forces.

The basic principles of combat use of massed aviation should pursue the resolution of the following tasks by the air forces of the *RKKA*:

a. to have superiority in the air, both for attack and direct protection of the territory of the Soviet Union, and especially the most important areas, regions, and centers with respect to economic, political, and military affairs;

b. in case of an attack against the Soviet Union by one of the capitalist powers or a bloc of such states, to thwart at its foundation the mobilization and concentration of their armies and to disrupt the administrative and economic life of whole areas, mainly with respect to military production;

c. interacting with naval forces to break up and destroy any enemy navy which would operate in waters adjacent to the Soviet Union;

d. to land vehicular and air assaults in the most revolutionary areas in order to organize and develop armed combat in the enemy rear area and on operationally advantageous sectors of enemy territory.

3. In the process of war, all light combat aviation is subordinated to the field command of armies and *fronts* and interacts with ground forces. As a rule, heavy combat aviation remains in the hands of the High Command to resolve independent missions as a long-range air fleet, to operate against enemy political and economic bases . . .

CONCLUSIONS

The basic contemporary problem is the simultaneous deployment of combat operations over a large depth. This problem is central, both in tactics and in operational art.

In tactics, its resolution is planned along the line of penetration over the entire depth of the enemy defense (area of artillery positions and tactical reserves), with the help of fast-moving tanks, artillery, infantry transports, and by means of assault aviation activities.

In operational art, this is achieved by means of deep arrival in the enemy's rear area or by penetration into this rear, if there are no open flanks, of large cavalry masses and mechanized formations, with the support of powerful aviation. The forces of these formations (both cavalry and mechanized forces) are counted on not only to create congestion in the enemy's rear area, but also to be able to independently attack his large reserves or withdrawing forces. Operations should be developed simultaneously from the front and the rear.

The problem of operational control presently includes the correct combination and uninterrupted control of troops fighting from the front and troops advancing from the deep rear and against the deep rear areas of the enemy.

The following issues are most correctly resolved by means of planned organizational measures:

1. organization of air forces and mechanized units;

2. strategic cavalry—sufficiently outfitting cavalry divisions and corps with technical means of combat;

3. organization of troops operating from the front—rifle corps obtaining additional means of suppression on directions of the main strike.

With respect to motorized troops, the internal structure and content of such formations as the motorized division have not yet been disclosed; the broad issue of transporting troops on motor vehicles has still in no way been posed.

The problem with means of control of battle has still not been resolved in all aviation units or among all troops.

The existing internal structure of headquarters, the number of personnel in them, and their means of control are not capable of controlling the battle and operation which is developing immediately on a large depth. It is necessary to implement the planned reorganization of control apparatus immediately.

Only our cavalry has some experience in activities in the spirit of new demands on the operational scale.[5] However, it has no experience of activity in the enemy's deep rear area jointly with tanks, aviation, and other means of combat.

As for deep combined arms tactics, tactics of mechanized formations, and mass combat use of aviation, we not only have no experience, but the basic tenets of the new equipment and operational art have also not been theoretically worked out.

All this requires rapid organization of broad research work, with the help of organization of experimental exercises and large ground forces and air maneuvers.

ENDNOTES

1. A. I. Yegorov, "Taktika i operativnoye iskusstvo *RKKA* na novom etape," *Voyenno-istoricheskiy zhurnal* [Military-historical journal], 10 (October 1963), pp. 30—39.
2. Editor's note: An aviette is a small-powered or light motor aircraft which appeared after World War I in connection with the attempt in various countries to create a simple, cheap, economical type of aircraft. Later, aviettes were widely used in the Soviet Union as exercise aircraft, e.g., the UT-1 and UT-2.
3. Translator's note: the article has no point #5, but goes directly from #4 to #6.
4. Editor's note: In the given concrete instance, an attempt is made to mechanically transfer the experience of the Civil War into new conditions, where aviation, tanks, and artillery have become the decisive force for conducting deep operations.
5. Editor's note: Here the cavalry is clearly idealized as a combat arm.

THE DEVELOPMENT OF THE THEORY OF SOVIET OPERATIONAL ART IN THE 1930s[1]

G. Isserson[2]

Soviet military theory, based on Marxist-Leninist study and using the rich combat experience of the past, was born in the years of the Civil War and covered a great path of development in the two decades up to 1941.

The military-theoretical views of the 1930s, with which we entered into the Great Patriotic War, are of particularly great interest. If in the 1920s our military-theoretical thought rested mainly on the experience of World War I and was, to a significant degree, focused on the past, then in the 1930s it turned forward, toward an investigation of the problems of future war and methods of conducting it.

This period has special significance in the development of our military theory. It provides a clear picture of vast research work, wide creative thought, and important principal decisions. Namely, the fundamentals of deep battle and deep operation, which opened a new page in the theory of operational art, were developed in these years.

The deep form of combat was conditioned by the entire socio-economic development of the Soviet Union and the reconstruction of the Red Army. It was necessary for the solution of the problem of conducting annihilating operations, overcoming a continuous front, and penetrating it over the entire operational depth, i.e., achieving an aim which was not and could not be achieved in World War I.

The History of Deep Battle.

For the sake of historical truth it must be mentioned that the issue of deep battle was put forward for the first time by the English military theorist Fuller at the end of 1918. In anticipation of the decisive offensive in 1919 (the Entente did not count on a victorious conclusion to the war in 1918), Fuller proposed at that time to organize an attack of fast-moving tanks against the depth of the enemy's tactical deployment simultaneously with a tank attack against the forward edge of the defense. It is true that he had not yet formed the concept of a long-range tank group, although there existed all the tactical prerequisites in the proposal which was advanced.

However, Fuller's theoretical views on the issue of deep battle were based on this. The conditions of capitalist development of bourgeois armies compelled him to shift to a theory of small professional armies for which the problem of the offensive was generally decided in a different way. This theory, reflecting the class nature of the capitalist military system, was in clear contradiction to the actual nature of modern war. For Fuller, deep battle was not a battle of combined combat arms. He wrote that "a formation [*soyedineniye*] of tanks with infantry is tantamount to harnessing a tractor in tandem with a cart horse".[3] Of course, such a point of view was, for us, completely unacceptable.

Foreign regulations of the 1930s did not, in general, contain instructions on deep battle in the sense of simultaneous suppression of the entire tactical depth of the enemy. This idea belonged to our military-theoretical thought.

If we are to focus on the sources of our first concrete impressions on deep forms of struggle, it is impossible not to mention two documents of 1928-1929 which had great significance.

The first document is a report from M. N. Tukhachevsky on reconstructing the Red Army and supplying it with new, modern armaments, mainly tanks and aviation.[4] Having unfolded in this an expansive program for the rearmament of the army, Tukhachevsky wrote in conclusion that on the new materiel-technical base one could successfully reject the former wasteful, laborious form of combat against each critical element of the enemy's battle formation individually and shift to new, more effective ways and means of conducting battle, simultaneously suppressing the entire depth of an enemy deployment.

The second document is a report from V. K. Triandafillov on the use of tanks in an offensive battle, composed of three groups echeloned according to the range of activity—*NPP* [*neposredstvennaya poderzhka pekhoty*/direct infantry support], DPP [*dal'nyaya poderzhka pekhoty*/long-range infantry support] and *DD* [*dal'nego deystviya*/long-range],[5] which penetrate at varied depths right up to enemy artillery positions and headquarters, and which thus suppress the entire tactical depth of enemy deployment, cooperating with long-range artillery and aviation. This method of using tanks was already a practical realization of Tukhachevsky's idea on the fact that new, modern means of combat—tanks, long-range artillery, aviation, and airborne assault landings—made it possible to reject the old, slow methods of subsequently striking the

enemy by units, and to shift to new forms of the simultaneous deep strike. With his report Triandafillov personally laid the concrete foundations of new forms of battle and presented the principal sketch of its organization and conduct.

Thus, in the above-mentioned documents Tukhachevsky and Triandafillov for the first time articulated the concept of deep battle and, by this, enormously influenced the path of the development of our army and the formation of the principal views of our military-theoretical thought.

This idea had already been reflected in the *Field Regulation of 1929*, which looked far ahead and was the most progressive of the European manuals of that time. Article 191 of the Regulation mentioned the allotment of special battalions to be thrust directly into the second defensive zone. Article 207 precisely established the concept of a long-range tank echelon designated to go into the depth of the defense simultaneously with the attack of the forward edge. Thus, *Field Regulation-29* already contained the first prerequisites for shifting to deep tactics based on the actions of combined combat arms

In the creation of a theory of forms of deep combat, Tukhachevsky's and Triandafillov's merit lies in the fact that they did not lag behind changing historical conditions, but foresaw the possibilities of new technical means of combat at a time when our army did not have them, when it was not yet reconstructed.

K. B. Kalinovsky (first chief of mechanized troops) carefully worked out the tactics of the actions of the *NPP*, *DPP*, and *DD* tank groups, and thus placed a practical foundation under the entire concept of deep battle. This foundation can be considered to have been laid in 1930.

The concept of deep battle received recognition at first in academic circles. At the beginning of 1930, the Frunze Military Academy was working on tactical problems on maps and on terrain concerning the new foundations of deep battle and played a large role in their dissemination in the army. Then, at the Academy, R. P. Eydeman (chief of the Academy), N. Ya. Kotov, K. A. Chaykovsky, P. I. Vakulich, S. N. Krasil'nikov, P. G. Ponedelin, I. P. Kit-Viytenko, R. S. Tsiffer, and others did significant work in this field.

Soviet military theorists were pioneers in this field at a time when in the West they were still not talking about the tactics of deep battle.

At the beginning of the 1930s, proceeding from the experience of exercises and maneuvers which had been conducted, Tukhachevsky wrote in one of his service reports:

> Modern means of suppression, used on a massive scale, make it possible to achieve a simultaneous attack and destruction of the entire depth of the tactical deployment of the enemy defense.
>
> These means, in the first place tanks, make it possible to:
>
> *a.* suppress the system of fire of the enemy defense so that a large part of the artillery and machine guns is not able to take part in repelling the attack and the penetration of the advancing infantry and *NPP* tanks into the depth of the defensive zone;
>
> *b.* destroy the system of control, and pin down and isolate enemy reserves so as to rout various echelons of the enemy battle formation in the depth of the defensive zone during the battle.

Tukhachevsky was absolutely clear in his definition of the missions of deep battle. However, they were not all immediately understood. At a plenum of the Revolutionary Military Council [*RVS*] of the USSR, K. Ye. Voroshilov came out against Tukhachevsky. His criticism brought to light a clear lack of understanding of the essence of the issue, which Voroshilov reduced to a single type of battle, the offensive against an enemy who has halted.

Deep tactics were, of course, basically developed for a more complex type of battle, the offensive against an enemy defense. However, by its very essence deep tactics were not a type of battle, but a new form and new method of conducting battle, and were to be used in any type of offensive.

Tukhachevsky patiently explained this to Voroshilov in a special report in order to eliminate the confusion which arose concerning this in the minds of command personnel.[6] I. E. Yakir, I. P. Uborevich, and S. S. Kamenev, representatives of the higher command, supported him, and the correct understanding of the essence of deep tactics as a new form and method of modern battle was affirmed.

First Basic Tenets of Deep Operation

Only one half of the problem was solved by the establishment of the fundamentals of deep battle. Tactical penetrations were successful in World War I with the help of old tactical procedures as well. The primary essence of the entire problem consisted of how to crown tactical success with the operational development of the penetration and, having broken through a ruptured breech of the front into maneuverable space, how to destroy enemy personnel on an operational scale.

Thus, the idea of deep battle immediately touched the very cardinal problem of operational art and defined it by means of a new solution.

Tactics were triumphant, but proponents of deep operation remained concerned. And here there occurred a major misfortune. In the summer of 1931, V. K. Triandafillov and K. B. Kalinovsky perished in an air crash. The family of deep operation proponents seemed to be orphaned, and at first operational thought did not find a new path.

Expressing the concern at that time due to the fact that, "our military theory lags far behind the country's successful execution of the general party line;" Tukhachevsky said that "in connection with growth of our socialist economy we cannot remain at the former level of our military-theoretical thought, but should strive for the decisive development of our military-theoretical thought on the basis of Marxism."

After Triandafillov's death, Tukhachevsky continued to work intensively on deep forms of combat. In 1932 he concluded the first part of his work, *Novyye voprosy voyny* [New issues of war], conceived on a broad scale, in which he investigated the influence of modern technical means of combat on the change in forms and methods of conducting battle and operations.[7] However, the first part of this work contained mainly technical and tactical issues. Apparently, Tukhachevsky intended to treat operational and strategic issues in the second and third parts of the work, in which he proposed to investigate the fundamentals of modern war and the struggle against imperialist coalitions. This work was not considered to be completed.

Nevertheless, it was absolutely clear that changes in tactics also had to be reflected in operational art. The necessity of a decisive step along the path of creating a new theory of conducting operations was recognized by everyone. Pointing to the importance of this mission, Tukhachevsky wrote that "the reconstruction of the army calls for new forms of operational art."[8] The first kernel of truth ripened for this in the concept of deep battle; following this, new operational thought penetrated into consciousness. Our army attained a degree of development and capabilities for use which authoritatively put forward the demand for new use of forces and means in large-scale, decisive operations on the ground and in the air.

All fundamental issues of operational art as a study of the conduct of operations had first of all to be reexamined from the point of view of conditions which had completely changed. Such a statement of the issue advanced a number of new problems, opening an enormous field for Marxist military-scientific investigation. All the fundamentals existed for stating that the main mission of our operational art consisted of creating new forms and means of decisive, annihilating operations under new historical conditions, with a new army, and on a new materiel-technical base.

Of course, here there was no complete analogy with the tactical resolution of the problem, since the battle (tactics) and the operation (operational art) have their own qualitative differences determined by spatial and temporal scale and by the differentiation of the operational force structure from the tactical battle formation, which is a single, connected system of direct interaction. The organization of a deep operational strike, in this respect, was to have an essential distinction from the organization of deep battle, and this posed a number of new problems. The simultaneity of the deep strike could not, on an operational scale, receive such direct expression.

However, one thing was certain: aviation, airborne assault landings, and mechanized and motorized formations appropriately organized for independent operational use could also extend their long-range strike to the operational depth of the enemy, measured approximately as a distance of 50-60 kilometers, i.e., to the line of deployment of the operational reserves and forward airfields and headquarters. Here, the problem consisted not only of the fact that modern long-range and fast-paced means of combat make it possible to organize a deep enemy strike, but also of the fact that this is necessary in order to fundamentally solve the

problem of operational penetration, which, without a strike on the entire operational depth, cannot be resolved.

It was necessary to translate the principal plan of deep battle into an operational scale. For this, firstly, mechanized formations capable, with respect to their organization and arms, of resolving independent operational missions were required. Secondly, the problem consisted of how to project the efforts of these formations into the operational depth of the enemy. Thus, the main problem of organizing a deep operation was reduced, in essence, to solving the problem of how to turn a tactical penetration into an operational one, i.e., how to commit independent mechanized formations into a penetration through a ruptured breach in the tactical defense.

These were the first basic tenets of the theory of deep operation. But these, while only general arguments, required thorough investigation and needed a theoretical foundation and concrete formulation. The vast work in this area, begun in 1931-1932, was related to the creation of the operations department at the Frunze Military Academy, which played a definite role in the development of our operational art.

The Operations Department of the Frunze Military Academy

The establishment itself of a department signified a new step in the development of the theory of operational art, which had grown out of a tight framework. A thorough study of the problem of conducting modern operations was required. In addition to this, there arose the current need for well-trained and broadly-educated personnel with operational perspectives for higher staffs. The operations department of the Frunze Military Academy, called on to resolve these problems, began its work in the autumn of 1931. It proposed the commencement of a reexamination of the fundamentals of operational art and established a vast amount of scientific-research work, posing and solving a number of new problems. The guiding idea was deep operational forms of combat. Now these began to receive a theoretical foundation and concrete formation.

A collective of intelligent and capable instructors worked in the department, including old military specialists as well, who thoroughly understood the necessity of reexamining their own opinions on the nature of modern operations and were permeated by the new ideas of the deep forms of combat. Among the department collective were the instructors A. V. Fedotov (my department assistant), S. N. Krasil'nikov, Ye. N. Sergeyev, and A. M. Peremytov, and technical leaders in various specialties A. N. Lapchinskiy, D. M. Karbyshev, I. I. Trutko, and B. K. Leonardov (from the Military-Medical Academy). Lapchinskiy worked on problems of the use of aviation in an operation. Karbyshev, by means of his work on the organization of modern defense on the part of the enemy, brilliant in depth and detail, provided the capability for a careful study of the conditions of a deep penetration. Trutko was in charge of work on the rear, and Leonardov was in charge of the organization of medical evacuation. Having scientifically based calculations of possible losses in a modern operation and the requirement for hospitals and evacuation assets, he reworked the entire scheme of medical evacuation in a deep operation. Unfortunately, many of the enumerated leadership personnel of the department are no longer alive today. A. N. Lapchinskiy died in 1938, D. M. Karbyshev died the death of a hero in a fascist camp; Fedotov, Sergeyev, Peremytov, and Trutko were victims of the anarchy in the years of Stalin's cult of personality.

It should be noted that exceptionally favorable conditions for work in the department were created by the chief of the academy, R. P. Eydeman, who knew how to value and respect a young, creatively operating cadre, to protect it, and to help it.

The instructions of M. N. Tukhachevsky and A. I. Sedyakin (at that time chief of the Combat Preparation Directorate) had great, inestimable significance for the direction of the work of the operations department. The broad scope of Tukhachevsky's operational thought and Sedyakin's inquisitive mind were directed at many issues and pointed to the path of their solution.

A. I. Yegorov (then Chief of Staff of the *RKKA*) also adhered to the foremost opinions on the new nature of modern operations. He liked and supported any new idea. In 1931 he presented a massive report at the military academy on the "spatial operation" (as he called the deep operation). The report was illustrated by a mobile outline developed by V. I. Mikulin, instructor at the academy. The term "spatial operation" was, of course, imprecise, because any space has two measurements in one plane, i e., along the front and in the depth. Maximum spatial sweep had been achieved already in World War I. Characteristic for the development of the forms of operation of a future war was their extension into the depth. Therefore, the distinction from

operations of the past was better and more correctly expressed by the concept of the deep operation. This definition was established for it in Soviet military theory, and was then adopted by all bourgeois military literature.

With respect to Tukhachevsky, Sedyakin, and Yegorov, who occupied leading posts in the army, the operations department met with the broadest support, and this was especially valuable, for it is known how difficult it is to lay a new path and make the first breach in opinions which are already rooted and which many of the old military specialists in the academy tenaciously held. One need only recall the disbelief and ironic comments that greeted the works of the operations department. This, of course, made the work difficult, but it could not stop the development of our military theory. Some of the old specialists simply stayed on the sidelines of this process. However, the majority of them soon understood the very progressiveness of the idea of the deep operation and firmly stood on the new path, having brought great favor to the development of our operational art. Among them were N. Ye. Varfolomeyev, Ye. A. Shilkovsky, N. N. Shvarts, F. P. Shafalovich, A. I. Gotovtsev, and a number of others. Even A. A. Svechin, in the final analysis, agreed with the inevitability of a shift to new forms of combat and supported the concept of the deep operation, examining it, however, within the framework of the strategy of attrition [*strategiya izmora*].

Not everything was smooth in the work of the department, and acceptance of the new ideas was far from immediate.

Even at the *RKKA* Staff itself there was not, at first, complete unity on the issues of the new nature of modern operations. Some workers of the operations directorate (S. A. Mezheninov, P. S. Obysov) did not support the principal foundations of the deep operation. They objected, in particular, to the independent use of mechanized forces before the front and in the depth of a penetration separated from the combined arms formations. However, on these issues the operations department had the full support of the Chief of Staff of the *RKKA*, Marshal Yegorov.

Development of the Theory of Deep Operations

The entire development of the theory of deep operations was conducted on an operational scale; at that time we did not concern ourselves with problems of military strategy, such as the conduct of armed conflict on the scale of a war as a whole.

Suppression of the enemy's operational depth undoubtedly affected the strategic sphere of armed conflict; however this required, first of all, the solution of practical issues on the use of mechanized formations and their cooperation with aviation and airborne landings, which were limited to operational scales.

At the beginning of the 1930s, we had three mechanized corps in all, which were not enough to combine into larger groups (or armies) of *frontal* designation. Therefore, their use at first was conceived as individual corps jointly operating with motorized divisions and cavalry on an army scale. Therefore, the initial step in the development of the theory of deep operations was the army operation as the operation of a shock army.

In the development of this theory two possible situations were kept in mind: when the enemy is approaching in free maneuver movement; when the enemy, having taken up an organized defensive deployment, structures a dense front of resistance.

In the first instance, in the presence of an extensive dispersal between the sides, it was considered possible to organize a deep strike on a selected direction by means of advancing a group of highly-mobile troops (mechanized formations and cavalry), supported by aviation. This group was to be landed in the rear jointly with aviation and an airborne landing, attack and wrest from the enemy, who had approached the front, a specific portion of the operational structure, and form in it a breach with bare flanks, causing hesitation on the part of the enemy. The primary mission consisted of not allowing the enemy to form a continuous front and dig in. Those foundations on which a continuous front was structured and held had to be knocked out. The group operating before the front was called the advance guard echelon.

Combined arms formations which had approached, comprising the main echelon, could be directed to the flank which had been formed and could conduct the attack with a decisive aim. Here, the operational depth was not to be left undefended, since it could be subject to a deep penetration on the part of the enemy. Therefore, it was considered necessary to bring up an army reserve group in 2-3 traverses behind the main echelon; this group was called the reserve echelon.

Thus, the entire operational structure of the army during an offensive against an approaching enemy consisted of three echelons (advance guard, main, and reserve) and could occupy as much as 200 kilometers and more in the depth. Already in this formation deep forms of operations were rather fully expressed.

The solution of the problem of a deep operation against the established front of an enemy who took up a defensive position was more complex.

Four problems required a practical solution to achieve the goals of a deep operation of a penetration:

a. what should be the operational formation and the operational use of various combat arms (basically, mechanized, combined arms, aviation, and airborne landing);

b. to what operational depth could and should the operational efforts be brought, keeping in mind their supply situation (this issue related mainly to the allowable depth of separation of a mechanized group from the front of the combined arms formations);

c. how to organize the operational development of a penetration so that the tactical break in the front immediately develops into its operational break over the entire operational depth and into complete destruction;

d. how to isolate the enemy front being penetrated in the operational depth so as to prevent a concentration of new reserves able to hinder the operational development of the penetration, and so as not to allow the reestablishment of the penetrated front.

The theoretical and practical development of these issues in a number of examples on maps led to the following solutions, which were posited as the foundation of the preliminary concept of deep operations:

a. the operational formation of an army for penetration should consist of two echelons: an echelon of attack, consisting of combined arms formations which have penetrated the tactical defense, reinforced by artillery and tanks; and an echelon for developing the penetration, consisting of highly-mobile mechanized, motorized, and cavalry formations developing the penetration through the broken tactical breach of the *defense into its operational* depth;

b. the echelon for developing the penetration should be engaged quickly following the penetration of the first defensive zone, if it has been broken on a sector 6-8-km wide; in a favorable situation this can be done even earlier. In this case, the echelon itself suppresses the last resistance in the tactical depth of the enemy defense. In any case, it should intercept the enemy's second defensive zone before he is able to withdraw to it or have his reserves occupy it;

c. all operational development of the penetration on an army scale is conducted at a depth of 60-100 kilometers—to the line of deployment of the enemy's forward storage facilities and army headquarters;

d. army aviation (light bomber and ground attack) is used in the preparation of the penetration and subsequently for operational cooperation with the echelon for development of the penetration, so as to deprive enemy reserves of the ability to operate and resist in the depth;

e. *frontal* aviation (long-range bomber) is used to isolate completely the enemy front being penetrated from his strategic depth and prevent the approach of strategic reserves;

f. an airborne landing is thrust into the depth of the deployment of the enemy's forward storage facilities and army headquarters to interact with the echelon for development of the penetration in the operational depth.

This was, in general, the initial principal outline of deep operations, which was accepted in practice at the academy in 1932. On the basis of this the first operational assignment on the theme "A Deep Offensive Operation Of A Shock Army" was worked out on a map; it was published and distributed to other academies and district headquarters.

In 1932, lectures were given in the department on the tactics of deep battle. In them the concept, the foundations of which were laid by Triandafillov, was expanded. These lectures were published by the academy. In the same year lectures on new problems of the modern deep operation were given. At first they bore a general theoretical character, but in 1933 they received a more specific, designed formulation. In the work *Osnovy glubokoy operatsii* [Fundamentals of the deep operation], published by the academy, the already

applied theory of forms and methods of conducting deep operation and its development in the depth to a decisive, ultimate result was set forth. The chapters on the work of army headquarters and control of deep operation at each stage of its development acquired important significance in this work.

By order of M. N. Tukhachevsky (then Deputy People's Commissar for Defense), the work was examined by a commission of the Staff of the *RKKA* under the chairmanship of A. I. Yegorov. The commission recognized the necessity of distributing the work as an unofficial manual to all academies and district headquarters. *Fundamentals of the Deep Operation* was published by the Frunze Military Academy in 100 copies and soon became the text-guide on operational art, playing a specific role in forming the views of our military theory. In this work the theory of the deep operation was simplified for the first time into concrete forms and received an applied exposition. It was used as a textbook in 1936 at the then-General Staff Academy.

Of course, *Fundamentals of the Deep Operation*, as the first work in this field, written during the first five-year plan when the technical reconstruction of our army was still in the initial stages, far from fully foresaw (or, therefore, solved) all the complex problems of organizing and conducting a deep operation. However, the initial principal foundations were laid. Subsequently, the theory of the deep operation received further theoretical development, and in the brilliant operations of the Great Patriotic War a number of substantial corrections were introduced into it.

In 1933, an enormous, bilateral operational war game was conducted in the operations department. The difference of opinions on individual principal issues of deep operation were reflected in this game. The argument mainly concerned the possibility of independent actions of a mechanized group before the front and in the operational depth of the enemy separated from the combined arms formations.

The student playing the role of army commander in the game, under the influence of the present commanders of the operations directorate of the Staff of the *RKKA*, refused to advance his mechanized group ahead of the front in order to decisively attack the enemy who had approached. It required the persistent interference of the leadership in the role of *front* command for the course of events to take on the direction desired for the aims of the game.

Marshal Yegorov was present the entire time at the game, which lasted three days. He attentively followed the course of the game, and by his guiding questions supported the bold use of the mechanized group, full of initiative, to solve the independent operational missions. In summing up, the Marshal gave the concluding words and said that for the first time in our army the issues of deep operation received in a war game such full and developed treatment. This was an acknowledgement of the definite results achieved in the development of new foundations of our operational art.

Practical Work in the Army

But military theory is never created by a single piece of theoretical research. It is born of the practical experience of training in the army in peacetime and in the course of its actions in war. Therefore, it would be completely incorrect to suppose that the theory of the deep operation was engendered and created by a single, closed collective of an operations department at a military academy.

Deep forms of combat ripened so much with the appearance of new armaments that this theory simultaneously was engendered in the army on the initiative of a number of military personalities. Independent of the operations department, work on the theory of deep operation was done at other academies as well, in particular the tank academy, Zhukovsky Air Academy, and the chemical defense academy, and in military districts, especially the Belorussian and Ukrainian Military Districts and in the Special Red Banner Far East Army. I. P. Uborevich (commander of the Belorussian Military District) and I. E. Yakir (commander of the Ukrainian Military District) and their chiefs of staff—Bobrov and D. A. Kuchinsky; the then-Deputy Chief of Armored Forces, I. K. Gryaznov; the Chief of the Tank Academy M. Ya. Germanovich; the Chief of Chemical Troops, Ya. M. Fishman, and other comrades from the tank and artillery academies introduced a number of new tenets into the theory of the deep operation, adding to and developing it.

Experimental exercises with tanks and airborne landings, conducted by Uborevich, Yakir, and Gryaznov, provided much of value. Troop maneuvers in the 1930s and district war games were, in this respect, a great school and provided a number of valuable theoretical and practical conclusions.

It should be especially noted that Uborevich and his staff developed the combat formation of a mechanized group during its entry into a penetration and its action in the operational depth. Uborevich also resolved in a new way the problem of the battle of an advance guard reinforced by tanks until the approach of the main forces. Yakir and his staff particularly worked out the problem of cooperation between a mechanized group and an airborne landing in the operational depth. V. K. Blyukher, I. F. Fed'ko, and M. V. Sangursky worked out in practice problems of deep battle as applied to conditions of the Far East. Under the leadership of Gryaznov a number of exercises with tanks in the Transbaykal area were conducted. An enormous amount of work was carried out among the troops which enriched and deepened our military theory.

In general, if in the operations department of the Frunze Military Academy the development of issues of deep forms of combat inevitably took on a more theoretical character, then in the military districts the problems of this theory were made all the more concrete and received practical development.

Thus, from the beginning of the 1930s our military theory developed and was generalized, having later taken on the nature of a polished concept of deep forms of combat in the field of tactics and operational art with the completion of the reconstruction of the army and the introduction of more improved armaments into it.

Many comrades, in addition to those mentioned, took part in this work; among them, S. N. Bogomyakov, V. D. Grendal', A. V. Kirpichnikov, V. K. Mordvinov, P. D. Korkodinov, B. L. Teplinsky, and a number of others should be mentioned. Basically these were all young cadres filled with enormous enthusiasm and faith in the success of the work on the development of Soviet military theory.

In these years the troops began to retrain on the basis of the new principles for conducting battle. Already in 1931 Uborevich published the first unofficial instructions on deep battle. In 1933 the official instructions of the Staff of the *RKKA*, developed by A. I. Sedyakin, appeared.

The *Field Regulation of 1929* was already obsolete; under the leadership of M. N. Tukhachevsky the new *Field Regulation of 1936* was developed, fully reflecting for the first time the fundamentals of deep tactics.

One of the leading articles of this manual said that ". . . the enemy should be pinned down through the entire depth of his deployment, encircled, and destroyed" (article 164).

In these years there appeared the first significant scientific-research work on strategy and operational art and independent use of mechanized formations, aviation, and airborne landings.[10]

Turning now to the brilliant deep operations conducted by the Soviet Army in the last war, we should recall the period of the 1930s which has been examined. It was namely then that the foundations of deep operations were for the first time developed and formulated. Of course, this was only the beginning, and of course the initial concept of deep operations was far from perfect and required even greater development. However, the beginning was set and it brought a strong foundation to the further development of our operational art. This occurred already in the second half of the 1930s and on the eve of the Great Patriotic War.[11]

In the second half of the 1930s, the development of Soviet military theory continued in a situation of the growing threat of war and a number of military events in Europe and other parts of the world. This stage was complex, contradictory, and unstable. The influence of Stalin's cult of personality, which brought the Red Army grievous trials, adversely affected this. However, during these years too our military theory continued to improve and expand.

In 1936 the problem of the reconstruction of the Red Army and its rearmament was basically solved, although this process, in connection with the continuous development of technology and appearance of new, improved means of combat, could never be considered terminated.

New deep forms of battle and operations continued to improve and develop. With the entire course of events of the 1930s, which were characterized by enormous growth of armed forces on the European continent, these forms received even greater acknowledgement and confirmation. Now Western bourgeois military-theoretical thought, having clearly borrowed this concept from us, began to speak with determination about it and develop it on the pages of its official presses. Behind its general discussions there came to light the already fully concrete views of the German-fascist command on the use of tank formations and deep echeloning of the battle formation.

In 1936 General Guderian, the fascist theorist of tank war, established the following sequence of using tank formations on the offensive: the first echelon passes directly through the tactical depth of the defense and attacks its reserves (this is our echelon for development of the penetration); the second echelon attacks enemy artillery (this is our long-range group); the third echelon attacks the infantry within the limits of the tactical depth of the defense (this is our immediate and long-range infantry support group). Here, in Guderian's opinion, the use of armored divisions was to be particularly effective when the defense was already detected on a specific sector and the sudden appearance of tanks at that moment would make it possible for them to immediately penetrate behind the defensive zone onto a maneuverable expanse. This entire system of attack, with some changes in sequence, was a copy of our principal outline of deep battle approved already in 1932-1933.

Thus, the deep structure of an operation and the operational depth of combat actions were being more and more acknowledged as characteristic for modern conditions. But we had already shifted from these principal tenets to a higher class of mastery of the art of conducting deep operations. This task advanced the necessity of establishing a special institute for expanding the development of operational art and preparing educated higher headquarters commanders. The framework of the operations department of the Frunze Military Academy was too narrow for this, and already at the beginning of 1936 the question of establishing a special military academy as a higher operations school was posed. It was established in the autumn of 1936 and named the General Staff Academy. This had great significance for the further development of the theory of operational art. The preparation of our command cadres was raised to a higher level and entered a new phase.

The General Staff Academy

Work on the theory of the deep operation at the new academy received further development; however, the work kept to the operational scale and the academic plan of the academy pursued the goal of preparing experts in organizing and conducting modern operations. In essence, this turned the academy into a technical school for the preparation of cadres for higher staffs. From the point of view of practical needs of the army in a period of establishing new forms of operation, this was correct. However, this narrow mission assignment contained a negative aspect. The theory of the deep operation in 1936 had attained such a level of evolution that it was already impossible to exclude the strategic sphere of its development, and only the strategic scale and situation in an entire TVD [*teatr voyennykh deystviy*/theater of military actions] could give it a sensible, purposeful significance which was warranted under the given conditions.

In the operations department, which was the first step in the development of new operational forms of combat, deep operation could still be studied outside of its relationship to the overall strategic situation. However, after the principal outline of deep operations was developed, another approach was required. At the General Staff Academy it was necessary to examine deep operations as a means of carrying out a specific strategic mission and to give it a concrete direction, depending on the situation in which it could arise and be developed in the given TVD. In other words, so that the developed outline of deep operation could be turned into an actual phenomenon, it was necessary to underpin it with a specific strategic background and inject strategic content into it.

All this was completely clear when the General Staff Academy started its work. However, the smallest hint of the necessity in some way or another of introducing into the academy a strategy course as a base for operational art met with objections from above. When this issue was raised at one of the meetings before the opening of the academy, Marshal Yegorov, Chief of the General Staff, with some irritation directly asked academy representatives "What are you going to study concerning strategy? A war plan? Strategic deployment? Conduct of war? No one will allow you this because this is the business of the General Staff!"

There was, of course, no objection to asking such a question, and the chief of the academy, D. A. Kuchinsky, a man with a very lively and practical mind and a great organizer, agreed with the marshal and rejected the conduct of a strategy course at the academy. But the issue, of course, was not one of studying at the academy the development of practical problems of a strategic nature, which were the purview of the General Staff. It was a matter of bringing the operational art course closer to the actual military-political situation which had been created in connection with the deployment in the center of Europe of a large, aggressive army in fascist Germany. For this it was necessary to evaluate the new correlation and grouping of forces on the new western border, and to analyze and study the possible situation of war erupting and the nature of its initial

period. All this brought the operational art course closer to the scale and problems of strategy, and required enormous research work in this area.

M. N. Tukhachevsky indicated the importance of this task. He believed that it was impossible to answer the question of what would be the nature of all future war, because war changes its forms and nature as a measure of development, and it was impossible to divine this in advance. But he stated: "The first period of war should be correctly foreseen in peacetime, and it is necessary to correctly prepare for this."[12] Unfortunately, there was no place for such work in the academy. This was one of the reasons that our military-theoretical thought before the war did not receive proper and flexible strategic orientation relative to those possibilities and conditions under which military actions could begin on our borders. Representatives of the higher command were also disinclined to give lectures at the academy on strategic issues, and only Tukhachevsky spoke once at the beginning of 1937 on general problems of modern war. It should be noted, however, that district commanders I. E. Yakir and I. P. Uborevich spoke at the academy on the issues of deep battle and use of mechanized forces in an operation, and conducted war games with the instructors. Corps commander G. P. Sofronov, at that time chairman of a commission on working out problems of the use of airborne landing units, conducted exercises with students and acquainted the instructors with this new problem.

Thus, with respect to strategy, the establishment of the General Staff Academy in 1936 changed nothing in the system of our higher military education. The actual roots of this position lay in Stalin's cult of personality; issues of policy and strategy were considered the exclusive realm of the higher political and military leadership. The negative consequences of this were felt at the beginning of the war in 1941, when many within the high chain of command (of *fronts* and armies) were confronted with the necessity of independently examining a large-scale situation and making serious decisions of strategic significance. A certain confusion, and the inability to grasp a complex situation in its totality, to make expedient decisions on a large scale, and to subordinate the entire course of events to this were, to a significant degree, the result of a lack of strategic orientation and a lack of preparation to think in terms of large categories of strategic significance. We paid a heavy price in 1941 for our narrow view on the tasks of preparing cadres and for the inadequate development of our military-theoretical thought in the field of strategy.

The leading departments of the academy (operational art and tactics of higher formations) understood the significance of strategic issues for the proper direction of their work. In the winter of 1936-1937 their chiefs turned to M. N. Tukhachevsky, First Deputy People's Commissar for Defense, with a request to clarify a number of questions of a strategic nature. A conversation with Tukhachevsky concerned important problems of modern war, its initial period, and forms and methods of conducting modern operations.[13] It had great significance for the structure of the operational art course at the academy, introduced clarity into the understanding of many important problems, and pointed out in which direction our military-theoretical thought should develop. Of course, the plan of the academic course was dictated by directives of the General Staff, but Tukhachevsky played a large role in posing a number of operational problems.

The operational art department worked out operational assignments based on the actual perspective of the initial period of war which it was able at that time to imagine. This representation was, of course, far from the situation which arose in 1941, which at that time was impossible to foresee. It is true that the forces of fascist Germany and her probable allies were viewed as the primary enemy; however, strategic conditions and operational forms of deployment on our western border at the initial period of the war were far from sufficiently investigated.

It was suggested that during initial strategic deployment a continuous front would be formed, requiring penetration and making a frontal strike unavoidable. From the point of view of force calculation and theater capacity, this was, in general, correct. However, here the new capabilities of mechanized forces to break through the front before it could be organized and established, thus bringing it into confusion at a great depth, were not taken into consideration.

The development of mobile operations was, of course, foreseen, but mainly after the penetration of a front. In the operational depth mobile actions were to attain the widest development and decisive result. However, in order to acquire this capability, it was considered necessary first to penetrate the front. Primary attention was concentrated on the solution of this most difficult task.

According to views accepted at that time, which were supported by Marshal Yegorov, in the initial period of the war it was proposed to invade the enemy's border territory, disrupt his mobilization and concentration, and support the deployment of one's own forces, all by means of dynamic actions in the air and on the ground. These missions were to be carried out on the most important operational directions by invasion groups consisting of mechanized and cavalry formations and border troops supported by strong aviation. The actions of these invasion groups thus took the form of separate operations conducted before the deployment of the main forces. In their nature they recalled the old methods of operations not unlike the invasion of the German group into Belgium at the beginning of World War I for the purpose of capturing Liege.

This was the initial point of view. M. N. Tukhachevsky came out against it with good reason. According to his weighty considerations, separate invasion group actions in the presence of fortified borders, heavy composition, and a high degree of readiness of border troops could not be counted on for success and could lead to great losses. Already in 1934 in one of his service lectures Tukhachevsky wrote that

> the conduct of war by means of old methods, i.e., in previous forms of strategic deployment, is impossible...
>
> the old usual impressions of the concentration of mass armies along the railroads leading to the border and on the mass nature of border engagements already cannot correspond to actual conditions.[14]

Foreseeing the great vulnerability of the border theaters of war with respect to enemy aviation, he considered the entire accepted plan of mobilization and concentration of mass armies to be obsolete, requiring fundamental changes. Tukhachevsky proposed the maintenance in the border zone of forward armies with a heavy composition as the first operational echelon of the main forces. In his opinion, in a period of threat of a danger of war these armies should be covertly concentrated in areas occupying, if possible, flank positions with respect to those directions on which the enemy was most likely to initiate military actions.

Tukhachevsky attached great significance to fortified regions built up on the border. According to him, fortified regions were to be a shield taking on themselves the enemy advance, a hammer inflicting a flank strike on the enemy. However, a passive-defensive significance should in no way be attached to fortified regions. They were, in Tukhachevsky's opinion, an operational factor organically connected with the dynamic actions of field armies and a fulcrum for their maneuver in the overall offensive operations.

These were the primary theoretical views on the nature of actions in the initial period of war. Unfortunately, we did not use them, due to a different political-strategic situation in which we found ourselves in June 1941.

Proceeding from these views, which at that time had weighty foundation, the General Staff Academy in 1936 began work on developing our military theory and preparing higher command personnel. The primary operational task of the academy encompassed the successive development of the deep army offensive operation in the Belorussian-Polish TVD. It was worked on at the academy for 2-3 consecutive years. In working out this task, the entire collective of the operations department, as well as student M. V. Zakharov (now Marshal of the Soviet Union), who was attached to the department, participated.

The problems of deep operations received a more detailed and multi-sided treatment. Three variants for committing an echelon for development of the penetration were envisioned:

First variant—with a weakly-occupied defense and in the absence of large enemy reserves, the echelon for developing the penetration is committed at the very beginning of the attack or before the complete penetration of the tactical depth of the enemy defense. In this case the echelon for developing the penetration should itself make a breach in the defense and penetrate into its depth. Such a variant provides, of course, the most rapid rate of the offensive, but it can be used only against a weak enemy.

Second variant—this is considered to be the most normal case: the echelon for developing the penetration is committed after the tactical depth of the enemy defense has been penetrated and a breach has been opened in it. It was suggested that with a defense of average strength and in the presence of adequate offensive means, this can be achieved at the end of the first day of the battle.

Third variant—the most complex, when it is necessary to penetrate a strongly-fortified zone, and the penetration of the tactical depth of the defense itself can lead to serious battles lasting several days. In this case the commitment of the echelon for developing the penetration is possible to reinforce a tactical strike in

the depth, followed by a complete breakthrough of the defense jointly with the advancing troops. Such a variant for using an echelon for developing the penetration is considered the least desirable, since it leads to the exhaustion of forces before the primary mission has begun to be carried out in the operational depth. However, this variant cannot be excluded in penetrating a permanently fortified zone.

Several variants of actions of an echelon for developing the penetration in the operational depth were also worked out.

The first is the so-called short variant: in the absence of significant enemy reserves, a comparatively weak echelon for developing the penetration, having intercepted the second defensive zone, immediately turns to the rear of the defense so as to encircle and destroy defending garrisons jointly with forces attacking from the front. In this case only forward motorized detachments and reconnaissance are thrown into the operational rear (up to 50 kilometers).

The second is the so-called deep variant: a strong echelon for developing the penetration immediately directs itself against enemy operational reserves for the purpose of attacking and destroying them, cooperating with aviation and an airborne landing dropped in the deep rear. In this case the entire strike can extend to a depth of as much as 100 kilometers, while separate blocking motorized infantry detachments are left in the rear of enemy garrisons still defending from the front.

Finally, the third is the combined variant: the echelon for developing the penetration interacts with another echelon for development committed by a neighboring army. In this case, the two echelons for developing the penetration, operating from various directions and heading toward each other, should close the ring of encirclement around a large enemy group and destroy it.

In one way or another, all these variants were used in the Great Patriotic War.

After this, the entire theme of the offensive operation was broadened by the introduction of a cavalry-mechanized army [*konnomekhanizirovannaya armiya*] controlled by *front* command.[15] Thus, the development of the deep operation took on a strategic character. However, since here only the aim of studying the actions of a cavalry-mechanized army consisting of several mechanized and cavalry corps and motorized divisions, supported by aviation and an airborne landing, was pursued, the sphere of the strategic operation was still far from being grasped.

In any case, the deep operation received further development at the General Staff Academy, posing for our military-theoretical thought a number of new questions In this respect, 1936-1937 were the years of its new flight and animation. Unfortunately, this ascent did not last for long.

A Difficult Period

In the spring of 1937 there took place events which shook the Red Army to its very foundation. Arbitrariness and anarchy engendered by Stalin's cult of personality spread over a large part of the higher and senior command personnel. The victims were honored and experienced cadres, and the army was, in essence, beheaded. For many years these cadres had been in charge of army training and the operational preparation of its command personnel, advancing Soviet military theory by indicating the path for its development. Now they were declared "enemies of the people," while the military-theoretical work created by them on new forms of battle and operations was called into question and declared all but sabotage. All textbooks, official and unofficial military literature, the authors of which had been repressed, were removed, and it was not known by what one could and could not be guided in military theory. Even at the General Staff Academy they began to sound the retreat on the basic issues of deep operations, taking exception to the actions of mechanized formations before the front and their use to develop the penetration into the rear. And all this took place one year before the mobile operation fully revealed its new nature in the German-Polish campaign in the autumn of 1939.

The incorrectly understood and generalized experience of the war in Spain also had a negative influence on acknowledging the new ideas. A thoroughly mistaken, historically near-sighted conclusion was drawn from this that the new means of combat only provided the possibility of conducting a modern attack, but they changed nothing in its nature and forms.

After the war in Spain and our marches of liberation into Western Belorussia and the Western Ukraine, mechanized corps—the main strike forces of deep operations on the ground—were even disbanded in the Red

Army, and the development of bomber aviation—the primary strike force in the air—was curtailed. Such incorrect measures deprived the theory of the deep operation of the primary material base on which it was being developed. The disbanding of mechanized formations did great harm to the army.

Everything mentioned above could not help but affect the development of our theoretical views. Creative initiative was rigidly paralyzed for the time. The seed of doubt was sown in military thought, and instead of expanding and developing the theory of the deep operation, already knocking on the door of history, it began to come up against unspoken impediments.

This, of course, could not help but kindle a certain confusion in the minds of young command personnel who, after 1937, were advanced to high command posts and in 1941 were to bear the first strikes inflicted by the German-fascist command in the style of the deep operation. The fact that these young, honorable, brave chiefs could not at the beginning of the war correctly act in the whirlpool of events into which they were suddenly drawn was explained to a certain degree by the fact that they were not adequately oriented to the new nature of the deep operations which they were encountering.

In sum, in 1937-1938 there occurred a certain deviation from the correct line of development of our military theory, which caused a certain stagnation and indeterminateness in this field. Although this set-back left serious consequences, it was, however, only temporary.

A New Lift

The cult of personality could not stop the general forward movement of the development of Soviet military theory. In 1939 military-theoretical thought made new steps in its further development, taking into consideration the experience of military events which were occurring. It is true that the "phony war" in the West and the Soviet-Finnish war in the winter of 1939-1940 hid the actual forms of a large modern war and even could have been misleading. The Maginot Line was still unassailable and inevitably determined the positional nature of war. The war in Finland seemed to confirm this.

Thus, in reality the forms of deep operations remained undisclosed. Only the German-Polish war in September 1939 was the first implementation in action of new deep forms of combat. Of course, this was only a separate campaign and conclusions from it could not yet have ultimate significance.[16] However, in six months events broke in the West which fully disclosed the nature of deep operations at the high level of a large, modern European war.

Already the initial events of World War II in Poland and France showed that Soviet military-theoretical thought was following the true path and correctly envisioned deep forms of modern operations. However, their clearly-expressed mobile nature and unprecedented scope (with respect to depth) exceeded all of the most optimistic suppositions. The campaigns of 1939 in Poland and 1940 in France revealed the new nature of the initial period of modern war. They demonstrated that military operations begin with an invasion of the main mass of armed forces, concentrated beforehand. They attached to the initial period of war a picture of operations suddenly breaking on a large strategic scale, and required their examination from a strategic point of view. Under these conditions operational art not only moved closer to strategy, but also intertwined with it in an organic mutual connection.

However, our operational art was locked, to a certain degree, within its own framework, while the strategic sphere, unfortunately, chiefly remained outside of military theory research. The requisite attention to the disclosure of the initial period of war was not emphasized, and the necessary theoretical conclusions applicable to our western TVD were not made. This was an indisputable problem of our military theory and, of course, was evident at the beginning of the war in 1941.

In the last years before the war, forms and methods of conducting operations continued to be studied at the General Staff Academy chiefly on an operational scale, irrespective of the strategic situation which could arise at the beginning of the war. However, under the influence of events in military-theoretical thought which were taking place, there occurred a definite shift. First, the study of mobile operations occupied a significantly greater place. Second, the problem of defense on an operational scale attracted general attention. Young commanders remaining at the academy after graduation infused a fresh spirit into the creative work. They comprised the basic cadre of instructional personnel. Among them were I. Kh. Bagramyan (now Marshal of the Soviet Union), F. P. Isayev, V. Ye. Klimovskikh, N. V. Korneyev, A. V. Sukhomlin, N. I. Trubetskoy, A. M. Shimonayev, P. G. Yarchevsky, and a number of others. The older generation of specialists—A. I. Gotovtsev,

A. V. Kirpichnikov, S. N. Krasil'nikov, F. P. Shafalovich, N. N. Shvarts, Ye. A. Shilovsky, and others—also contributed in these years their vast experience and knowledge in solving new problems [17]

The Theory of Operational Defense

In 1938, for the first time in the existence of the General Staff Academy, the issue of a defensive operation was put forth. The reasons for this were not openly discussed in academic circles. However, every proponent of deep operations understood that in encounters with the strong, aggressive army of German fascism on specific sectors of a front, and during specific periods of time, the defense would be a natural, and in some cases unavoidable, method of operation in order to stop the onslaught of a strong enemy and exhaust him. Defense on the operational scale presented less of a research problem. Over the entire history of the Frunze Military Academy and the General Staff Academy, the theme of "The Army On The Defense" had not once been studied. Tactically, the defense had been well developed by us and occupied a place in all the field regulations befitting its significance. However, to speak about the defense by an army on the operational scale in a significant sector of a TVD was considered somehow improper and all but contradictory to our offensive doctrine. Here it was not taken into consideration that the latter did not exclude defensive operations as a type and method of military action. One could adhere to an offensive doctrine and have a theoretically well-developed defense. Conversely, one could, in fact, adhere to a defensive doctrine and neglect the careful development of defense issues on an operational scale, as the French did. That is the dialectic of this issue, which, unfortunately, was not clarified properly.

In World War I, the defense, despite exceptionally strong engineer-tactical development, did not achieve operational organization. Everything was reduced to only fighting to maintain a tactical zone of defense. Reserves were designated to resolve only this mission by means of counterattacks and counterstrokes. When the tactical zone was penetrated, the defense moved back and resistance was organized on a new line. With the fall of a tactical zone, all operational capabilities of the defense were exhausted, and a concentration of new reserves, who either reestablished the former position if possible, or created a new defensive front, was required.

Now it was considered necessary to resolve the issue of defense and its forms in a new way. Depending on the methods of the offensive, the defense on the operational scale was to take on a deep nature and be capable of holding even in case of penetration by enemy tank formations into its rear. For this purpose, it was suggested to organize within the framework of an army a tactical zone of defense out of two defensive zones joined by a number of intersecting antitank lines, and to turn every populated area and every convenient (with respect to relief) sector in the army rear enclosed by the army defensive zone into an antitank "fortress." An army area of defense could occupy up to 75-100 kilometers in depth. This concept envisaged that an enemy tank group, having penetrated through the tactical zone of defense, would fall into a labyrinth consisting of antitank areas ("fortresses") in the operational depth, against which it would be destroyed. The structure of the defense itself was to force the enemy to develop the offensive in the depth not as was planned, but as predetermined by the entire system of created lines and antitank "fortresses." It was namely in this respect that the defense was to impose its will on the attacker; it would be conducted in an area of great depth and would be a uniform operational system.

The theory of operational defense was stated in a work published by the academy, *Osnovy oboronitel'noy operatsii* [Fundamentals of the defensive operation]. A large operational assignment was also worked out on a map at the academy, the theme being the defense of an army with the delivery of a counterstroke. The development of a defensive operation in a new way undoubtedly enriched Soviet military theory and had similar significance for the development of forms of defense as deep operation had for the development for forms of the offense.

On the Eve of the War

Thus, in the last years before the war, the circle of operational issues significantly widened. This notably affected the vigor of our military-theoretical thought.

The meeting of the Higher Military Council in December 1940 had great significance for the development of Soviet military theory on the eve of the war; here the results of the military events of 1939 and spring 1940 were discussed, important talks on the nature of modern operations were heard, and a decision to create anew the mechanized corps was made.

At the end of the 1930s, enormous work was carried out in publishing new official instructions, regulations, and directions. The plan for a new Field Regulation, worked out in 1939, introduced corrections into the *Field Regulation of 1936* on the basis of the latest experience, and significantly broadened the concept of deep battle. For example, a new article was included (article 294) on the development of the penetration with an indication of those missions which fell on the combined arms formations at the moment that units of the echelon for developing the penetration passed through a breached defense. Also new in the *Field Regulation-39* was the chapter "On The Foundations of Troop Control in Battle," which set forth the principal issues of making an operational decision and carrying it out. While clearly expressing offensive ideas, this plan at the same time assigned a significant place to the defense, particularly indicating the necessity of its deep echelonment.

The plan for the *Field Regulation-39*, reworked in the spring of 1941, was the last manual before the war. It concluded the process of enormous work on regulations, reflecting the rapid and stormy development of our military-theoretical thought.[18] From 1925 through 1940, four Field Regulations (1925, 1929, 1936, and the plan for the *Field Regulation-39*) appeared. In each of these the forms of deep battle were developed even more broadly, and the results pointed to a specific stage in the development of our military theory, which clearly reflected the overall nature of its forward motion.

Development of Handbooks on Issues of Conducting Operations

It was significantly more complex to develop a handbook on the conduct of operations. The necessity of such a handbook, which did not exist in the past, arose from the new nature of deep operation as a complex system of using qualitatively different combat efforts in a single, centralized, uniform joint operation on the ground and in the air. In 1934, the plan for a handbook on the conduct of operations was worked out by A. V. Feodotov according to tasking by Marshal Yegorov; however, the plan was not accepted by the General Staff. At the end of the summer of 1936, a new draft for a handbook was worked out according to a tasking from Marshal Yegorov. This task was complex and its expediency was doubtful. The theory of the deep operation was still in the process of development; it was still not stable enough to be fixed conclusively. In addition to this, it was necessary to bring to a handbook on the conduct of operations the foundation of a definite strategic concept, at least for the initial period of war, and a prognosis of the principal lines of its subsequent development. But this complex, higher field of strategy was poorly researched. Therefore, the draft for the handbook took the form of an account of only the techniques of conducting, supporting, and controlling an operation. For the entire winter of 1936/37 the draft which had been worked out lay with A. I. Yegorov; afterwards, in connection with the events of 1937, it remained within his sphere.

Work on the handbook assisted in thinking through all the principal tenets of the deep operation, formulating them more precisely, and editorially refining them. In the draft for the handbook they received a more mature, clearer, more established expression. One copy of this draft was sent to the General Staff Academy and used as the basis of instruction for the academy's operational art course. Its individual sections were issued for use as an unofficial textbook under title of *Osnovy vedeniya operatsii* [Fundamentals of conducting operations].

An attempt to publish the handbook on conducting operations was not resumed before the war. In sum, before the war we did not have any operational instructions or official handbook on operational art. There was no such handbook in any European army, even the German one. In general, there was doubt as to whether a stable, official handbook on the conduct of operations could play a positive role in a period of great changes in forms and methods of conducting armed combat. It was much more important to continue the comprehensive study of the problems of operational art in their further development, and to inculcate new ideas of deep forms of combat to the broad contingent of proponents of operational art. This mission was carried out by the General Staff Academy, the students of which were directly trained and educated in the spirit of the concept of deep operations, which was at the basis of their military thought. From this medium, a number of prominent commanders and organizers of triumphant deep operations came forward in the course of the Great Patriotic War.

Along with the basic tenets of our operational art, higher command personnel were familiar with instructions and large-scale war games and maneuvers conducted in the districts. Therefore, despite the absence of official instructions on conducting operations, the fundamentals of operational art were well known to higher command personnel, and this was felt in full measure when the Soviet Army, after the difficult

initial period of the war, went over to conducting decisive offensive operations. The enormous significance of the vast creative work in the field of military theory which was conducted before the war came to light. However, at the beginning of the war, on the strength of conditions which unfolded, this theory could not be effective or applicable.

Conclusions

An investigation of the history of the development of Soviet military-theoretical thought would be incomplete and would not achieve its goal if the question were not disclosed and explained as to why our military theory, which envisioned to such a great extent and so correctly the nature of future operations, was not able to play a positive role in the difficult situation which unfolded in the initial period of the war. Serious conclusions should be drawn from this.

Despite the fact that a number of operational-strategic issues, including the problem of the initial period of war, remained unresearched, on the eve of the war we had a progressive military theory, with respect to its principal tenets. It proceeded from, above all, a correct prognosis of a future war as an attack against the Soviet Union by a coalition of capitalist countries and as a struggle against them not for life but to the death.

It foresaw the stubborn and prolonged nature of this struggle, requiring the enormous effort of all moral and material forces of the country. "We must take into account the fact that a difficult prolonged war lies before us, we must be able to distinguish the periods of the war, and we must be able to consistently dismember and eliminate the coalition of capital," Tukhachevsky wrote.[19] It was namely this initial position which required of our military theory a clear solution to the problems of the subsequent conduct of offensive operations with the most decisive goals, right up to the routing of the enemy on his own territory, and which attached to our military doctrine a clearly-expressed offensive character. However, keeping in mind the prolonged and intense course of the struggle against its unavoidably changeable flow, our military theory foresaw a number of consecutive stages and war campaigns of the most varied operational-strategic nature and content.

In no way was it thought to end the war by means of a single lightning bolt, and it was namely this realistic point of view, and many others, which distinguished our military theory from the fascist adventuristic strategy of a total Blitzkrieg. The entire course of the Great Patriotic War demonstrated the correctness of our point of view and completely confirmed it by its actual development from beginning to end.

In the field of operational art, our military theory structured the conduct of an operation on the deep strike against the enemy, achieved by means of joint use of combat arms and types of weapons, to each of which, depending on the given concrete situation and available assets, was given more or less significance. The reliable strike against the entire operational depth expressed the main idea of our theory of operational art.

Our theory acknowledged the offensive operation as the primary type of operation. However, a deeply-echelonned defense found its place in the theory and design of the *Field Regulation of 1939* and was completely worked out. Military-theoretical research in general gave a sufficient foundation for the conduct of various types of operations: penetration, maneuver, envelopment, encirclement, actions in the operational depth of various types of defense, and breaking out of an encirclement. Army and *front* commands in our theory of operational art were able to find an adequate foundation for expedient operational-strategic decisions and organization of actions under the most complex conditions of the situation. Another issue was what type of operation and which forms and methods of operations were to be selected. This depended on the concrete situation and required its correct clarification and great flexibility of thought not bound by any dogma. But it was namely here that our school of operational preparation was not at a sufficient level.

We were bound by specific tenets of a declarative nature on the offensive conduct of war; on the fact that we would shift military operations to enemy territory, etc. These tenets were presented from the top as immutable guiding directives of our military policy and strategy, and were placed at the foundation of all military thought of command personnel. During Stalin's cult of personality, they acquired the significance of law and were not subject to discussion in theory. In sum, the entire military frame of mind imagined a future war no differently than a rapid shift to the offensive. All other possibilities of a strategic situation were excluded and not examined by theory.

Even the events unfolding in 1939 in Poland and in 1940 in France did not change these dominating official views and did not shake them. Not that in the depth of consciousness the higher officers of the General

Staff did not understand that the situation of the initial period of the war could unfold completely differently. In some circles of the General Staff and the General Staff Academy they even spoke about this rather concretely, with appropriate calculations in their hands. However, these conversations were conducted only behind closed doors and went no further than the offices.

Therefore, the situation in which the Great Patriotic War commenced in June 1941 was unexpected for the entire subjective strategic and military-theoretical orientation of our higher command, which gave birth to definite confusion and an inability to thoroughly understand the events, subordinate them to the will of the command, and seize the initiative. The orientation of military-theoretical thought on which our command was nurtured over the years continued by its own inertia to influence military speculation, although it had long since come into contradiction with the actual facts of strategic actions which had arisen on our western borders, at least from the autumn of 1940 when Hitler had begun to concentrate his forces in Western Poland and East Prussia.

The situation which had unfolded at the beginning of the Great Patriotic War required a completely different strategic orientation. But a rapid change in the mind-set of the military command, already involved in deadly engagements with the invading enemy, was not supported by the inculcation of flexible thought that was free to make the operational decisions considered necessary under the conditions which were being created. It was namely in this that could be found the reasons for the failure of the command of higher formations to extract the benefits from our advanced military theory which it could have acquired in the initial period of the war.

In addition to this, there were no older, experienced military leaders who created Soviet military theory and would have been able to implement it with a high degree of art, nor was there an adequate number of operationally-prepared commanders at the beginning of the war. Therefore, the serious drama which was played out in the summer of 1941 had deep-seated roots of political and strategic significance connected with Stalin's cult of personality. The consequences of this were immeasurably severe. They required tremendous sacrifices and caused enormous losses.

But the heroic Soviet people led by the great Communist Party were able to overcome the serious consequences of the initial period of the war. And when this occurred, the Soviet Army opened a brilliant series of deep operations of unprecedented strategic scope. These operations received such splendid implementation because, in addition to other decisive factors, their principal foundations were worked out before the war by advanced Soviet military theory. They enriched it, contributed much that was new, and created a rich fund of Soviet military art.

ENDNOTES

1. G. Isserson, "Razvitiye teorii sovetskogo operativnogo iskusstva v 30-ye gody," *Voyenno-istoricheskiy zhurnal* [Military-historical journal], 1 (January 1965), pp 36—46.
2. G. S Isserson in the 1930s occupied the post of chief of the operations department at the Frunze Military Academy, and then was the chief of the department of operational art at the General Staff Academy.

   In the present article, the author, using personal recollections, summarizes his views on the development of the theory of Soviet operational art in the 1930s.
3. J. F. Fuller, *Operations of Mechanized Forces*, translated from the English (Moscow: Voyenizdat, 1933), p. 13.
4. This report was known to a narrow circle of workers of the Staff of the Workers' And Peasants' Red Army (*RKKA*). It is discussed in greater detail in "Zapiski sovremmenika o M. N. Tukhachevskom" [Notes of a contemporary on M. N. Tukhachevsky], Voyenno-istoricheskiy Zhurnal, 4 (1963).
5. At first, Triandafillov called the two latter groups *TIP* (*tanki—istrebiteli pulemetov*/tanks—machine gun destroyers) and *TIA* (*tanki—istrebiteli artillerii*/tanks—artillery destroyers).
6. In November 1933, Tukhachevsky again turned to Voroshilov on this issue, and in a service report wrote:

   > . . . after your speech at the Plenum of the Revolutionary Military Council, an impression was created among many people that, despite new weapons in the army, tactics should remain old. . . . After the Plenum there began a complete fermentation in the minds of the commanders. Conversations are taking place concerning the rejection of new forms of tactics, rejection of their development. . . (See M. N. Tukhachevsky, *Izbrannyye proizvedeniya* [Selected works], Vol. 1 (Moscow: Voyenizdat, 1964) p. 18).
7. In 1936 Tukhachevsky significantly reworked the first part of his work, having in mind the rebirth of a large aggressive army in fascist Germany. Unfortunately, the reworked manuscript has been lost.
8. Tukhachevsky, *Selected Works*, Vol. I, p. 12.
9. Unfortunately, not a single copy of this work exists today—all were destroyed in the period of Stalin's cult of personality.
10. Among the scientific works published at this time, the following should be mentioned: N. Ye. Varfolomeyev, *Udarnaya armiya* (The shock army); M. R. Galaktionov, *Temp operatsiy* [Rate of operation — V. A. Melikov, *Problemy strategicheskogo razvertyvaniya*

[Problems of strategic deployment]; Ya. M. Zhigur, *Souremennyye operatsii* [Modern operations] (this work was not published and the manuscript was lost); A. N. Lapchinsky, and a number of others.

In 1932 there appeared the first edition of G. S. Isserson's *Evolyutsiya operativnogo iskusstva* [Evolution of operational art] (the second, supplemented edition appeared in 1937), in which the development of forms and methods of armed struggle in modern war was researched and a foundation for the theory of deep operation was given. In it, the fact was emphasized that we are on the threshold of a new epoch of military art and should transfer from a linear strategy to a deep strategy.

In December 1932, an analysis of this book was made in the Central Club of the Red Army named for Frunze. The Chief of the Combat Preparation Directorate, A. I. Sedyakin made the primary report, saying that ". . . the book is very instructive, providing a useful creative exercise and correct direction for operational thought."

According to Sedyakin's conclusion, ". . . the work on the whole, with a few corrections, quite correctly illuminates the problem of operational art" and "is for this great matter the first and very valuable contribution" (*Voyna i revolyutsiya* [War and revolution], 1-2 [1933], pp. 113—118).

11. Translator's note: the first part of the article ends here; it is continued in *Voyenno-istoricheskiy zhurnal* [Military-historical journal], March 1965, pp. 48—61.
12. M. N. Tukhachevsky, *Selected Works*, vol 1 (Moscow: Voyenizdat, 1964), p. 261.
13. This conversation is given in more detail in "Notes of a Contemporary on M. N. Tukhachevsky." See *Voyenno-istoricheskiy zhurnal*, 4 (1963).
14. Tukhachevsky, *Selected Works*, vol. 1, p. 24.
15. This task was worked out by A. V. Kirpichnikov, now Lieutenant General (retired).
16. In the German-Polish war of 1939 there were many specific conditions which were favorable to the conduct of a deep operation. At first the German deployment occupied an enveloping position with respect to Poland. The Polish theater was not fortified and represented full freedom of maneuver. The front was not continuous and the Germans had a great superiority in forces and equipment, with complete dominance in the air.
17. In the first part of the article, in enumerating military personalities contributing to the development of the theory of deep operation, the author made an omission by not naming A. Ya. Lapin, who worked in the beginning of the 1930s in the Military Preparation Directorate of the *RKKA*. A. Ya. Lapin actively participated in the development of the theory of deep battle and contributed many substantive suggestions to it.

    It was also mistakenly indicated that I. I. Trutko was a victim of the anarchy during the years of Stalin's cult of personality. In actuality, Major General I. I. Trutko perished in September 1941 while breaking out of the encirclement in the area north of Bedanovko, Lokhgistkiy region, Poltava *oblast'*, Southwestern Front.
18. Translator's note: the Russian word *burnyy* can mean "stormy," "impetuous," "rapid;" in light of the direct references to the cult of personality and indirect references by the author to the purges throughout the article, the term was probably deliberately chosen for its possible double meaning to describe the development of Soviet military thought.
19. M. N. Tukhachevsky, *Selected Works*, vol 1, p. 261.

WAS OUR MILITARY THEORY IN THE 1920s TURNED TO THE PAST?[1]

A. Golubev

An article by G. Isserson, *"Razvitiye teorii sovetskogo operativnogo iskusstva v 30-e gody"* [Development of the theory of Soviet operational art in the 1930s] was published in 1965 in the first and third issues of *Voyenno-istoricheskiy zhurnal* [Military-historical journal]. From the point of view of the history of Soviet military thought, this article is, undoubtedly, of substantial interest. The author states a number of new historical facts and, on the whole, correctly evaluates the concrete achievements of the theory of operational art in these years. But together with this, Comrade Isserson has a number of debatable positions as well. For example, he writes:

> If in the 1920s our military-theoretical thought rested mainly on the experience of World War I and was, to a significant degree, turned toward the past, then from the 1930s it turns forward to the investigation of issues of a future war and methods of conducting it.[2]

Such an evaluation of the development of Soviet military theory does not reflect the actual facts and processes. It seems to us that it is impossible to place such a sharp boundary between the two prewar decades. Each of them was connected with both a study of the "past" and an analysis of a possible "future." And on the whole, there existed a continuous link between them.

In the present article we will examine the basic ideas of the military theory of the 1920s which were reflected in the outstanding military-scientific works of that time. The development of Soviet military thought in the 1920s is basically defined by two facts. First, these years were a period of its establishment as a special military theory, based on the principles of Marxism-Leninism. Second, this was a time of great military reforms which determined the path of the development of the Soviet Armed Forces with broad prospects for the future.

Both required a thorough theoretical foundation. The 1920s was a period of stormy military-theoretical discussions such as there never were at a single stage of the subsequent development of Soviet military theory. In the course of discussions methodological foundations of Soviet military theory unfolded, its content was determined, and the first Soviet military scientific cadres were formed. A new basic classification of the theory of Soviet military art was also accepted. Instead of the former categories of only strategy and tactics, Soviet theory of military art began to consist of three relatively independent categories—strategy, operational art, and tactics—and the content of each of them was determined. Without resolving these problems, the further development of Soviet military theory would have been impossible in general. In actual fact, what kind of development of the theory of Soviet operational art in the 1930s could have been discussed if the concept itself of this theory and its object and content had not been established in the 1920s?

It is true that in the 1920s, especially at their beginning, Soviet military theory was occupied with the study of the experience of World War I, at that time a completely contemporary experience. But no less attention was focused on the experience of the Civil War. And this had great significance, since the forms of combat in these two wars were different. World War I basically was a positional one, while the Civil War proceeded in the form of large mobile operations. In the study of the experience of the wars, research on the history of World War I by V. F. Novitsky, A. M. Zayonchkovsky, A. S. Beloy, A. B. Bazarevsky, A. A. Svechin, A. M. Neznamov, M. D. Bonch-Bruyevich, and others had great significance,[3] as did research on the history of the Civil War by M. N. Tukhachevsky, B. M. Shaposhnikov, N. Ye. Kakurin, V. A. Melikov, and others.[4]

Points of view on the experience of each of these wars were different. But gradually the general opinion was worked out that future wars of the Soviet Union would fundamentally bear a broad, mobile nature.

At the beginning of the 1920s, increasingly greater attention began to be focused on the problems of future wars, and the determination of their nature and methods and forms of their conduct. These received the greatest development in the works of M. V. Frunze, in whose opinions lay the foundation of all military reforms carried out at that time. Proceeding from an analysis of the international and domestic situation of that time, Frunze in his works and presentations determined future possible wars of the Soviet Union as a decisive and all-embracing clash of two different socio-economic systems, in which all the production forces of the opposing sides would be drawn in. In connection with this, he considered inevitable the participation in them of mass armies and masses of new technical means of combat to such an extent as allowed by the production capabilities of the clashing sides.

Indicating that the armies of the bourgeois countries which were most advanced in a technical respect would arrive at the field of future engagements with weapons which, for the most part, were different from those which they had in World War I, Frunze stated, "Future war, to a significant degree, if not as a whole, will be a war of machines."[5] Proceeding from this, he considered one of the most important recurrent tasks to be every possible kind of acceleration of the Red Army's technical outfitting within the limits of those capabilities for which the administrative growth of the Soviet government provided.

He suggested that such wars could not be brought to a conclusion in a short period of time by a single "lightning," crushing blow from one or the other side in the style of the previous "strategy of annihilation" [*strategiya sokrusheniya*], a proponent of which always was the Prussian general staff, but would take on an extended and stubborn character which would exhaust the forces and means of the sides. It was required to orient the preparation of the country for defense, the theory of military art, and, in the first order, its main part—the theory of strategy—on such a characteristic of war.

He wrote:

> In the case of first-class enemies, a solution cannot be achieved by one blow. War will take on the nature of a prolonged and fierce contest subjecting to a test all economic and political foundations of the opposing countries. Expressed in the language of strategy, this means going over from a strategy of lightning, decisive blows to a strategy of attrition.[6]

The term "strategy of attrition" [*strategiya izmora*] was not acknowledged in Soviet military theory, although Frunze repeated it in each of his major presentations. Such an understanding of strategy directly issued from Lenin's definition of modern wars as a test of "all economic and organizational forces of each nation."[7] It coincided as well with the definition of the exhaustive nature of wars of the coming epoch of imperialism, which was given by Engels in the 1890s.[8]

The unpopularity of this term at that time and later was explained by two circumstances. The first was that among the leading command personnel of the Red Army at that time there was an influential group which overvalued the experience of the Civil War, especially its offensive operations, and was inclined to view future war from the point of view of the experience of these operations. Also significant were "theoretical" considerations about the fact that only the "strategy of annihilation" was peculiar to the Soviet state by its very nature as the state of the progressive revolutionary class. But here it was not taken into consideration that our Civil War did not consist of victorious operations alone. At its individual stages, Soviet troops more than once were forced to execute deep withdrawals, go over to the defense, and lose enormous territory; any shift after this to the offensive required new mobilizations, new efforts of all the materiel and spiritual forces of the Soviet republic.

The same part of the command personnel held to the conviction that the rear area of capitalist countries, in case of war with us, would be as precarious as the rear area of the white governments during the Civil War; therefore, after the first strikes the Red Army would develop a victorious offensive as it had in the latter years of the Civil War. Therefore, it was namely for this reason that it seemed that the "strategy of attrition" was, in principle, inapplicable to the Soviet State.

In introducing the concept of the "strategy of attrition," which arose from the nature of all great wars of the 20th century, M. V. Frunze proceeded from the fact that in these wars victory was not achieved by a single strike or a single, uninterrupted offensive. It was possible as a result of conducting many operations and campaigns, inevitably drawn out over an extended period of time, and requiring not only the participation of massive armies in the conflict, but also the efforts of all forces and means of the deep rear areas of the opposing countries. And only when all the forces and means of the enemy country were exhausted in the struggle, and when it was not able to continue armed opposition, only then could final victory over the enemy be counted on.

Citing the unavoidability of namely this characteristic of strategy in possible wars involving the Soviet Union at that time, he said that if the matter came to a great, grave war between the Soviet Union and a coalition of large bourgeois states, then there would be no limited goals of war, "the war will be to the death of the sides fighting one another." In such a war, the efforts of all forces, not only of the front, but also of the entire rear of the country, would be compulsory. Frunze wrote:

> This conclusion is not new; it was acquired from the experience of the past imperialist war. When the strategy of annihilation went bankrupt, when the first operational plans, which counted on

immediately delivering a crushing blow to the opposing side, was not crowned with success, when the strategy of annihilation was replaced by the strategy of attrition—it was then that all states, and in the first order the military machinery, had to pose before themselves the question of decisively enlisting all forces and means of the rear for the matter of defense. . . . We should now take these data into consideration so as not to be in a state of unpreparedness at the moment of a future military clash.[9]

Frunze himself did not come to this conclusion immediately. In his works of 1921-1922 there was no concept of "strategy of attrition;" moreover in their very substance they were directed against such a notion. This concept appeared in Frunze's works of 1924-1925 and was substantiated in them. His conversation with Lenin in the spring of 1922, in connection with a discussion on a unified military doctrine, had substantial significance in Frunze's turn of strategic thought.

In the summer of 1921, Frunze came out with the article "*Yedinaya voyennaya doktrina i Krasnaya Armiya*" [Unified military doctrine and the Red Army], in which he put forth in principle the correct position on the necessity of working out unified views on the development of the Soviet Armed Forces, their missions, and forms and methods of combat He called this system of views "unified military doctrine." The organization and preparation of the Armed Forces of the Soviet State were to be structured on the basis of this.

But he gave the first definitions of the concrete content of doctrine while still under the fresh influence of the just-completed victorious operations of the Civil War. In this period he presented a future revolutionary war of the Soviet State also basically as a civil or semi-civil war "under conditions of the developing world revolution,"[10] and considered that a special military theory, defined only by its class features and inapplicable under any other conditions, was necessary for the Soviet State.

Frunze's article caused a stormy discussion. Its final stage was the meeting of military delegates of the XI Party Congress and Frunze's discussion with Lenin. The reason that this discussion was not carried to its conclusion was subsequently explained thus by Frunze:

What was the essence of my proposals? It amounted to a reexamination of all issues of military science and art from the point of view of the proletariat, to the establishment of a proletarian study of war. . . . At that time I had not begun to develop the broad struggle. . . . My conversation with Comrade Lenin played a decisive role. I told him my point of view, and he answered me: 'From the point of view of perspectives, your approach is, of course, correct. Of course, you should be prepared for the task of fully mastering military affairs and conducting corresponding work. Please, study, put forth youthful efforts, but if you now begin to come forth with a theory of proletarian art, then you run the risk of swaggering. It seems to me that our military communists are still not mature enough to claim leadership of all military affairs.'[11]

The instructions which Lenin gave to Frunze reflected Lenin's attitude toward science in general, and to the cultural and scientific legacy of the past as a whole. Beginning in 1918, Lenin conducted an irreconcilable struggle against at first the "left" communists, then against proletarian cult currents headed by empiriocritic A. A. Bogdanov, who came out against the use of cultural and scientific legacies of the past and for the creation of special, proletarian class sciences in all fields of knowledge. Lenin called for the study and assimilation of the entire cultural and scientific legacy of the past, as well as scientific and cultural achievements of modern capitalist states, on the basis of Marxist methodology. This also applied to the field of military knowledge. During the Civil War, Lenin more than once said that without military science it was impossible to create combat readiness for the Red Army. But he called not for the rapid creation of a new, special "proletarian" military theory, but for the rapid use of the already-existing military science which had developed for centuries, and for its mastery and use in the interests of the Soviet State for its defense against its enemies. Summing up in 1920 the experience of two years of Civil War, he explained:

You know that to study military affairs immediately is impossible . . . only the officers—colonels and generals who remain from the tsarist army—know military science.

[It] was necessary to gather command personnel from former officers so that the workers and peasants could learn from them, for without science it is impossible to build a modern army. . . . This task is a difficult one, but we will surmount it.[12]

Lenin understood Soviet military science, not in the sense that it rejects all past military knowledge and recreates it proceeding from "the class interests of the proletariat," but in the sense that it first assimilates all military knowledge of the past and then develops it as applicable to new historical conditions based on the principles of Marxism-Leninism. From these tenets came his instructions to Frunze in connection with the issues raised in the discussion on "unified military doctrine."

Frunze completely mastered Lenin's instructions, and his theoretical works of 1924-1925 greatly differed from his works of 1921 and those at the beginning of 1922. If in the works of the first years he strove to develop the principal tenets of Soviet military theory only from the features of the Soviet State and the military tasks standing before it, then in the works of the second period the center of gravity of his analysis lay in the objective study of the nature of modern wars and those tasks which they presented to modern military art and the practice of Soviet military development.

Frunze saw the primary path to victory in a future war in routing the enemy's armed forces and depriving him of all those strategic bases on which he relies to create, restore, and supply his armed forces. But for him this path was not in the form of an uninterrupted chain of offensive efforts, but in the form of a long and stubborn struggle, including many operations and campaigns, of which each resolved only a particular mission of war and required the most careful organization, preparation, and planned conduct.

Frunze's conclusion that future wars would be long and stubborn was based not only on the fact that in these wars massive armies would participate which would be impossible to shatter by a single blow, but also on the new role which the deep rear had begun to play in wars. He wrote:

> The primary and most important conclusion from the experience of the past imperialist war of 1914-1918 is the reevaluation of the issue of the role and significance of the rear in the overall course of military operations. . . . The experience of war demonstrated that the achievement of the aims of war under modern conditions has become a significantly more complex matter than before. Modern armies have enormous survivability. This survivability, as a whole, is connected with the general condition of the country. Even the complete destruction of enemy armies, achieved at a specific moment, still does not guarantee ultimate victory, inasmuch as the destroyed parts have behind them an economically and morally strong rear area. In the presence of time and space supporting a new mobilization of human and materiel resources necessary to restore the combat capability of the army, the latter can easily recreate the front and, with hope of success, conduct the struggle further. . . . The life and work of a front at a given moment is determined by the work and condition of the rear.[13]

From this it followed that to achieve the final victory in war it was necessary not only to destroy enemy forces at the front, but also to exhaust all resources and assets of the state necessary to continue the war. Already at that time Frunze quite distinctly also noted new forms of combat which had appeared, in the presence of which the simultaneous destruction of the enemy both on his front and in the deep rear became necessary, in connection with the development of equipment and means of destruction.

However, under the conditions of the 1920s, this was still viewed only as a position in an overall tendency of development of forms of armed conflict. Capabilities for striking the deep rear areas of an enemy country were limited and could not play a decisive role in the course of the war as a whole. The center of gravity of armed combat lay in the continental TVDs [*teatr voyennykh deystviy*/theater of military action]. Only here at that time could the forces of an opposing state really be exhausted, and Frunze's main attention was concentrated on the development of forms of combat on these theaters.

Frunze's conclusions on the inevitability of the protracted nature of war and the strategy corresponding to it did not elicit doubts among other great military theorists of that time. Tukhachevsky, who never used the term itself "strategy of attrition," came out sharply against the "strategy of attrition" and with all his nature gravitated toward calling for only a "strategy of annihilation;" nevertheless, in full agreement with Frunze's basic tenets in the middle of the 1920s he wrote:

> We must be prepared for a protracted war. . . . The world situation is already such, that a future war cannot be decided by a single stroke. But in individual periods of a war, in individual moments of tension, our country should strive to resolve those combat missions which stand before it by the most economic, rapid, and decisive means.[14]

But this was exactly what Frunze called the "strategy of attrition." He did not fully exclude the possibility of a "strategy of annihilation" either, i.e., the possibility of ending the war by a single blow or a series of strikes rapidly following one after the other, giving the war a fast-moving character. Moreover, he considered that objectively the imperialist states would strive for just such a feature of strategy in the struggle against the Soviet Union, attempting to avoid a protracted nature. He also did not exclude the fact that under certain conditions the Soviet State could have recourse to such a strategy. But he associated the possibility of such a strategy under those circumstances with the presence of especially favorable circumstances. He considered protracted war with the strategy peculiar to it as typical for that time. But in return, under all circumstances he excluded the possibility of striking the Soviet State by means of a lightning war or "blitzkrieg." He said:

> Even if the situation unfolded very unfavorably for us, we have a whole series of conditions which do not permit the possibility of rapid violence against us. Here, in the first order, we have, apart from external allies, such a powerful ally in the size of our own territory. The possibility of inflicting on us a mortal blow in the first period of the campaign, in the presence of any number of enemies who would come out against us, must be considered absolutely impossible.[15]

Soviet military theory's acknowledgement in the 1920s of the inevitability of a long, protracted war prompted the necessity of dividing the war into periods, campaigns, and operations, and determining the nature and scale of those missions which could be resolved in each of these forms of struggle on the path to the ultimate aims of the war.

In light of these requirements, Tukhachevsky continued to work on the theory of successive operations, implying by these a group of operations uninterruptedly developing on one direction, at the extreme depth possible, having recourse as a whole to that type of "ram" strategy which allowed the Red Army to rapidly surmount the entire territory of Belorussia in the summer campaign of 1920, but which did not provide success on the Vistula.

Frunze moved to the foreground the necessity of a thorough study of the organizational side of modern operations—techniques of their organization, preparation, and conduct on the basis of the most precise possible materiel-calculation data. He considered that organizational issues were advanced to the foreground by the entire course of the development of military art, especially in connection with the use of massive forces and means of combat. He said:

> I personally think that now the successful outcome of military operations, the outcome of the war depends to a much lesser degree on correct operational leadership than on the correct establishment of organization of the rear area. and all that prepares the conduct of military operations. At least three-quarters of all matters are resolved by preliminary work, strictly thought out on the basis of completely accurate data. Of course, all this work will not provide results with poor operational leadership, but the center of gravity is still being shifted more and more here.[16]

From here came the requirement for that time: "Fewer general discussions, more work on details and techniques of conducting operations!"[17]

The implementation of this requirement obliged Soviet military theory to concretely disclose the material content of modern operations; otherwise, the further development of the theory of strategy and operational art would be impossible. This was important for the theory of strategy because the potentials of each separate operation had to be at the foundation of all strategic plans. For the theory of operational art, the materiel side of the operation, its preparation, organization, and conduct comprised the very subject and content of the given theory.

The practical significance of this requirement proceeded from the fact that at this time in command personnel circles there was still strong gravitation toward conducting operations not on the basis of precise, calculated data of a materiel order, but mainly on the basis of taking into account the moral and revolutionary superiority of Red Army soldiers over the soldiers of capitalist countries. The extent to which such attitudes were strong and influential is reflected in this episode. One of the well-known, military-political workers of that time, F. Blyumental', the author of a number of voluminous books on political work in the army, in discussing the calculated norms of shells necessary to destroy one machine gun nest, seriously stated the norms were significant only when applied to bourgeois armies, since the conscientious Red Army soldier protected in a trench could withstand a significantly greater quantity of shells.[19]

The task posed by Frunze of studying the materiel side of operations and requirements proceeding from this for their organization and conduct was, on the whole, resolved in the second half of the 1920s by V. K. Triandafillov in the book *Kharakter operatsiy sovremennykh armiy* [The nature of operations of modern armies]. The significance of this book in the history of the development of the Soviet theory of strategy and operational art was enormous. For the first time in a single concept, which coordinated the combat operations of troops, their maneuver, and work of the rear in an operation, this book provided a completely distinct, current, and concrete representation concerning the materiel side and structure of an operation within the framework of those capabilities which the army had at its disposal at that time; it also convincingly demonstrated the role of materiel-technical calculations in the presence of a structure of plans of operation and their realization, established the extreme possibilities of individual operations of that time, and indicated the correct, scientific method for resolving similar theoretical and practical problems in the future.

At that time and later it was said about this book that it taught a broad cadre of Red Army command personnel to "think," to structure designs and plans not on the basis of intuition and consideration of only moral advantages of the conscientious Red Army soldier, but on precise materiel-technical calculations.

Triandafillov's book was structured on the basis of Marxist-Leninist methodology, for it took for analysis and subsequent generalization the objective, material aspect of the phenomena being studied. It approached these phenomena not from the point of view of whose interests they corresponded to, but from the point of view of what these phenomena actually were, and what they could actually provide in accordance with their material nature.

Having investigated the materiel basis of an operation, Triandafillov clarified its forms which proceeded from this. He demonstrated that materiel requirements of modern operations were enormous, while their potentials were limited. Based on this conclusion, he dispelled the hopes, still maintained by some people, concerning the reality under these conditions of a "strategy of annihilation," which envisioned (if this term is understood properly) taking any enemy out of action by means of a single, uninterrupted offensive on the entire depth of his resistance, on the scale of the war as a whole.

It was indisputably proven that large modern operations required careful materiel-organizational preparation, that it was impossible to conduct them uninterruptedly, that between them interruptions no less protracted than the operation itself were unavoidable and that these interruptions would be occupied by the preparation of new operations or by the repulsion of strikes of enemy reserves being brought up from the depth of the country or from other sectors of the front which were not being attacked at all or being attacked by fewer forces than in the zone of the main operations.

Triandafillov revealed the very close dependence of operations on their rear area, having shown the rear as a factor which limited the scope of an operation, its depth being no less, and sometimes even of greater importance than the combat resistance of enemy forces. Troops participating in an operation, even if they fully destroyed the enemy, at a certain stage would be forced to cease their advance as a result of separation from the rear areas which were feeding and supplying them. If advancing forces disregarded the disposition and organization of their rear area in the course of an operation, they could in turn find themselves in a critical or even catastrophic position, fraught with the danger of obliteration of all their previous successes.

Triandafillov also worked out the problem of the possible spatial scope of operations. He established that the most decisive operations of that time were possible in a zone no greater than 150-250 kilometers, with a maximum materially supported advance to a depth of also 150-250 kilometers, and this under the condition that advancing shock armies would not be restricted in motor vehicle assets; in the absence of this, the scope of the operation was reduced by several times. The primary factor which limited the scope of an operation under these conditions was railroad transport, since the tempo of restoration of railroads sharply lagged behind the tempo of troop movement possible and necessary to destroy the enemy in an offensive operation.

But with that spatial scope of operations, significant groupings of enemy armed forces (15-20 divisions) could be destroyed, and sectors of territory important to the enemy could be occupied. Such a depth of operation was sufficient to take small states (which emerged as members of an opposing coalition) out of action as a whole (if the depth of their territory did not exceed 200-250 kilometers). But in a conflict against a strong state which had at its disposal great territorial depth, and especially in a conflict against a large coalition,

such operations were conducted for the achievement of only individual successes which did not decide the fate of the war as a whole.

On the scale of a large war, the scope of a single operation was insufficient to decisively destroy enemy forces, even within the framework of the single TVD (or front), unique to the enemy. To destroy an enemy on an entire specific TVD (e.g., Belorussian, Ukrainian), Triandafillov considered the conduct of an operation in a zone of 350-400 kilometers necessary, with an advance on roughly the same depth and tempos of advance which outstripped the possible tempo of withdrawal of enemy troops. The materiel-technical conditions of the 1920s did not yet support such depth of operation. However, taking into account the uninterrupted development of means of combat and transport, Triandafillov considered such a scope of operations possible in the near future, and actually noted that it was necessary to work in these years so that such operations would become possible.

The development of forms and conditions for conducting such operations were set forth in the book for the theory of operational art as a concrete task for the near future.

The achievement of a depth of operations of 350-400 kilometers still did not create conditions for a shift of strategy to the destruction of the enemy on the scale of the war as a whole, but it did provide the possibility of inflicting destruction in such a large operation to large enemy groupings operating on a strategic direction or even on a TVD. This made it possible to conduct a war by larger strategic jumps and to reduce its time, but it could not endow the war with a "blitzkrieg" character, according to which everything counted on a single strike or a series of strikes uninterruptedly following one after another and fusing together in an uninterrupted offensive on the scale of a war as a whole.

Triandafillov refined the presentation concerning army offensive operations, having determined the depth of each of them as 30-50 kilometers, and also concerning successive operations, i.e.,uninterruptedly following one another, having combined army operations into a group of operations conducted on the scale of a *front*. The concept of deep operation, according to the indication of the depth of space embraced by the operation and the advance of the troops in the course of it, was formulated for the first time in his book.

Critically speaking to the "ram" strategy, for which the conduct of the entire operation, from beginning to end, in a single "ram" grouping was characteristic, Triandafillov convincingly proved the advantages of conducting an operation along convergent directions, which created the ability to encircle the enemy and facilitated troop advance and arrangement and operation of their rear area. He called for the maximum effort of troop forces and means to inflict the deepest strikes against the enemy, the limitations of which were to be determined only by the technical capabilities of the troops. Triandafillov proved that deep and shattering blows were "the most decisive means of strategy in achieving the aims assigned by the war,"[19] and they precisely "are the most reliable means for the rapid exhaustion of the enemy's human and materiel resources, and for the creation of objectively favorable conditions for a socio-political shake-up in the enemy country."[20]

The author did not limit himself to an analysis of offensive operations; he focused great attention on the issues of operational defense on a broad scale, considering it a necessary form of action and an integral part of war as a whole.

All of Triandafillov's book was based on materiel calculations and proceeded from them. This was its special strength, its clarity and persuasiveness. But at the same time, the book warned that war was not bookkeeping, that calculations gave only a method of work, and that in and of themselves they would not provide victory if they were not used for operational-strategic leadership based on the correct evaluation of the situation and on plans of action forever being outlined.

However, in reexamining all the issues, Triandafillov basically limited himself to the initial position for an operation and almost did not touch upon the dynamics of its conduct; he did not provide a division of the operation at various stages through which it inevitably had to pass, and very superficially spoke about the maneuver of troop forces and technical means of combat in the course of the operation itself. He did not broadly pose the question of combat against large enemy shock groupings, as if excluding the possibility of such operations, or of the nature of cooperation in the course of an operation of combined arms and mobile formations, represented at this time basically by large cavalry formations. There is no doubt that powerful mechanized formations could resolve similar missions better than cavalry, but at that time the Red Army still did not have them, and in the near future equipment would not be part of the armaments in the necessary quantity.

A shortcoming of the book was the fact that, practically speaking, in it the operation was examined basically only on an army scale (only the successive operations of a shock army); it did not raise its concrete analysis and generalization to operations on a *front* scale. Even the very term "*front* operation" was absent from it, and there was still no concept of air force operations. The investigation of these issues was, naturally, a future task for the Soviet theory of strategy and operational art, but the book created an initial position for the resolution of this task.

Triandafillov's book won recognition in wide circles of command personnel of our army. It could not be evaluated only as the individual research of the author; it was the objective expression of the level at which the Soviet theory of strategy and operational art stood at the end of the 1920s and beginning of the 1930s. In addition to this, in the second half of the 1920s this book was not the only work in Soviet military literature on the theory of strategy and operational art. There were other works, e.g., a number of articles by M. N. Tukhachevsky and the book by N. N. Movchin, *Posledovatel'nyye operatsii po opytu Marny i Visly* [Successive operations according to the experience of the Marne and the Vistula] (1928), which analyzed the theory of this issue using examples of the march of the German armies to the Marne in 1914 and the Soviet troops to the Vistula in 1920; it raised the analysis of these issues to operations at the *front* level, especially in the part on the arrangement of their rear areas. Important materials on issues of strategy and operational art were contained in a large work by B M. Shaposhnikov, *Mozg armii* [The brain of an army]. In it the work of the general staff was investigated primarily using examples of the actions of the Austro-Hungarian army.

The book *Strategiya* [Strategy] by professor A. A. Svechin, which was published in two editions in 1926 and 1927, provided a large amount of factual material and many correct propositions. In spite of the author's enthusiasm for the "strategy of attrition,"[21] this book, in view of the abundance of factual material included in it and the breadth of statement of the issues on the connection of military strategy and issues of economics and politics, even today is a unique work in comparison with all works which preceded it on issues of strategy in the old Russian army and abroad. The sharp polemics which developed with the publication of this book proceeded in the second half of the 1920s and beginning of the 1930s under the loud slogan of struggle "against reactionary currents on the military-scientific front," and bore, to a significant degree, a subjective character, while ignoring the fact that Svechin's book basically was written from materialistic positions. Although the author himself was not even a Marxist, in a number of places in his book he provided principally reliable materialistic concepts and carried them through with greater consistency than some of his critics who came forth in the course of discussions.

A most important positive feature of this book was the fact that all questions of strategy in it were examined in close connection with the political and economic aspects of wars. Svechin tried to prove that modern wars are conducted not only by armed forces, but that all the political and economic forces and means of the opposing sides participate in them. In connection with this, he advocated the idea that the aims, nature, and forms of strategy in such wars were not arbitrary, that they were determined by the political, economic, and military-technical capabilities of the opposing sides; these capabilities under modern conditions are such that wars, when powerful sides clash, inevitably take on a protracted characteristic in which the forms of combat are inevitably also extremely varied. Svechin also did not consider the term itself, "strategy of attrition," completely apt. He indicated that this term "very poorly reflects the entire variety of nuances of various strategic methods which lie beyond the limits of annihilation."[22] He emphasized that "strategy of attrition" in its understanding "in no way negates, in principle, the destruction of enemy personnel as an aim of the operation, but it sees in this only part of the missions of an armed front, and not the entire mission," and that under modern conditions "it is necessary to think not only about the projected efforts, but also about their 'dosage'."[23] In the book it is decisively stated that a "strategy of annihilation," i.e., that of a lightning, fast-paced war, if there are the objective prerequisites for this, is always more acceptable than a "strategy of attrition;" that the latter, "in general, is chosen only when the war cannot be brought to an end by a single procedure;"[24] with such a strategy, such decisive aims as with the "strategy of annihilation" can be pursued in the war as a whole.[25] Nevertheless, all polemics around this book were conducted from the point of view that the theory of "strategy of attrition" being developed by Svechin was a strategy of limited war aims, and this did not correspond with the very nature of the Soviet State, which in all wars had to pursue only the most decisive aims.

At the heart of Svechin's book were the lectures he gave at the Military Academy in the period when it was directly headed by M. V. Frunze, and many of their tenets coincided with those ideas which Frunze had

developed into the foundation of the concept of "strategy of attrition," which he had advanced. However, sharp polemics developed only after Frunze's death, and in the heat of them attempts were made in passing to call into question not only what Svechin had said, but also what Frunze had stated. Until the beginning of the 1960s, Svechin's book *Strategy* was the only systematic work which analyzed the strategy of the wars of the first quarter of the 20th century.

Issues of strategy and operational art were widely posed and analyzed in the 1920s in military-historical works as well. The prominent works of V. F. Novitsky on the maneuver period of the 1914 war on the Franco-German front, A. M. Zayonchkovsky on Russia's preparation for World War I and an overall strategic survey of this war, A. Bazarevsky on the campaigns of 1918, and others contained abundant material on the strategy and operational art of this war. The works of N. Ye. Kakurin, *Kak srazhalas' revolyutsiya* [How the revolution was fought], N. Ye. Kakurin and V. A. Melikov, *Voyna s belopolyakami* [The war against the White Poles], V. A. Melikov, *Marna - 1914, Visla - 1920, Smirna - 1922 goda* [The Marne - 1914, the Vistula, - 1920, Smyrna - 1922], and others provided material applicable to our civil war. All these works were not simple surveys of past historical events. In them were conclusions for modern times, and they enriched Soviet operational-strategic thought and influenced its development, at times no less, and sometimes even more, than the simple, dry transpositions of statements of regulation and instruction which took place in some works, or abstract discussions which claimed to be a statement of the theory of operational art and tactics.

In general it should be kept in mind that thorough military historical research is never limited only to knowledge of the past. In disclosing the regularities of past events, it always influences the development of modern military-theoretical thought as well. To disclose these regularities and to correctly explain the idiosyncracies of the modern epoch is possible only with a thorough study of the history of wars and military art as a whole. Modern times do not change the inherent regularities of wars and military art; they only make their forms concrete as applicable to new historical conditions, to new means of combat and trends in their development

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Such in general terms was the state of Soviet military theory in the 1920s and immediately on the threshold of the 1930s. Can it be said that the theory in its foundation was "turned to the past" and "rested mainly on the experience of World War I?" Such an understanding would be historically incorrect. Soviet military theory in the 1920s developed in an unusually tempestuous fashion, and approached the 1930s with a correct strategic orientation, with a basically developed theory of operational art and correct tenets in the field of tactics and organization of forces, and with a developed program for further preparation of the country for defense on the whole. Military-theoretical tasks of the 1930s consisted then not of simply thrusting aside the achievements of military theory of the preceding decade, i.e., turned mainly "to the past," but of using them as a starting point and developing them as applicable to the situation and the new conditions which were unfolding in the 1930s.

ENDNOTES

1. A. Golubev, "Obrashchena li byla v proshloye nasha voyennaya teoriya v 20-ye gody?," *Voyenno-istoricheskiy zhurnal* [Military-historical journal] 10 (October 1965), pp. 35—47
2. *Voyenno-istoricheskiy zhurnal* [Military-historical journal], 1 (1965), p. 36.
3. V. F. Novitsky, *Mirovaya voyna 1914-1918 gg. Kampaniya 1914 goda v Bel'gii i Frantsii* [The world war 1914-1918. The 1914 campaign in Belgium and France] vol. 1-2 (Moscow: GVIZ, 1924); A. Zayonchkovsky, *Mirovaya voyna 1914-1918 gg. Obshchiy strategicheskiy ocherk* [The world war 1914-1918. General strategic essay] (Moscow: GVIZ, 1924); *Podgotovka Rossii k imperialisticheskoy voyne. Ocherki voyennoy podgotovki i pervonachal'nykh planov* [Russia's preparation for the imperialist war. Essays on military preparation and initial plans] (Moscow: GVIZ, 1926); A. Beloy, *Galitsiyskaya bitva* [The Battle of Galicia] (Moscow-Leningrad: GIZ, 1929); A. Bazarevsky, *Mirovaya voyna 1914-1918 gg. Kampaniya 1918 goda vo Frantsii i v Bel'gii* [The world war 1914-1918. The 1918 campaign in France and Belgium], vol 1,2 (GIZ, 1927); A. A. Svechin, *Obshchiy obzor sukhoputnykh operatsiy mirovoy voyny. "Entsyklopedicheskiy slovar"* [General survey of ground forces operation of the world war. Encyclopedic dictionary] (Moscow: Granat) 7th edition, vol. 46; A. A. Neznamov, *Kampaniya 1915 goda* [The 1915 campaign] (Moscow: VVRS, 1922); M. Bonch-Bruyevich, *Poterya nami Galitsii v 1915 goda* [Our loss of Galicia in 1915], parts I, II (Moscow: 1920, 1926).
4. M. Tukhachevsky, *Politika i strategiya v grazhdanskoy voyne* [Politics and strategy in the civil war] in the book M. Tukhachevsky, *Sbornik izdannykh trudov, lektsiy, i statey po voprosam strategii* [Collection of selected works lectures and articles on issues of strategy] (Moscow: 1924); B. Shaposhnikov, *Na Visle. K istorii kampanii 1920 g.* [On the Vistula. On the history of the 1920 campaign] (Moscow: GVIZ, 1924); N. Kakurin, *Kak srazhalas' revolyutsiya* [How the revolution was fought], Vol 1-2 (Moscow-Leningrad; GIZ, 1925-1926); N. Kakurin and V. Melikov, *Voyna s belopolyakami* [War with the white Poles] (Moscow: GVIZ, 1925); V. Melikov, *Marna - 1914 goda, Visla - 1920 goda, Smirna - 1922 goda* [The Marne - 1914, the Vistula - 1920, Smyrna. - 1922] (Moscow-Leningrad: Giz, 1928).
5. M. V. Frunze, *Izbrannyye proizvedeniya* [Selected works], Vol II (Moscow: Voyenizdat, 1957), p. 343.

6. Ibid., p. 133.
7. V. I. Lenin, *Polnoye sobraniye sochineniy* [Complete collection of works], vol. 39, p. 321.
8. F. Engels, *Izbrannyye voyennyye proizvedeniya* [Selected military works] (Moscow: Voyenizdat, 1957), pp. 610—612; K. Marx and F. Engels, *Pis'ma* [Letters] (Moscow-Leningrad: Sotsekonomizdat), 1932, 4th edition, pp. 360—361, 387—388.
9. M. V. Frunze, *Selected Works*, Vol. 2, pp. 221—222.
10. Ibid., p. 3.
11. M. V. Frunze, *Sobraniye sochineniy* [Collected Works], Volume III (Moscow-Leningrad : GIZ, 1927), p. 150.
12. Lenin, Volume 40, p. 182—183.
13. Frunze, *Selected Works*, Volume II, pp. 133, 134.
14. M. N. Tukhachevsky, *Izbrannyye proizvedeniya* [Selected works], Volume 1 (Moscow: Voyenizdat) pp. 177—178.
15. Frunze, *Collected Works*, Volume III, p. 113.
16. Frunze, *Selected works*, Volume II, pp.177—178.
17. Ibid., p. 352.
18. *Krasnaya Zvezda* [Red Star], 7 February 1930.
19. V. K. Triandafillov, *Kharakter operatsiy sovremennykh armiy* [The Nature of operations of modern armies], 2d edition (Moscow: GVIZ, 1932), p. 152. The first edition of this book came out in 1929.
20. Ibid., p. 154.
21. A. A. Svechin borrowed the term "strategy of attrition" from the German military historian Hans Delbrueck. Svechin's opponents, in the heat of sharp polemics, attributed to him an understanding of the "strategy of attrition" in which acknowledgement of any role whatsoever of combat operations of armed forces was excluded, and the center of gravity of conducting war was shifted only onto the economic exhaustion of the enemy, onto his internal collapse and decomposition. Svechin himself was far from such a limited definition of "strategy of attrition."
22. A. Svechin, *Strategiya* [Strategy], 2d edition (Moscow: Voyennyy Vestnik, 1927), p. 178.
23. Ibid., p. 179.
24. Ibid., p. 180.
25. Ibid., p. 41.

PROBLEMS OF STRATEGY AND OPERATIONAL ART IN SOVIET MILITARY WORKS (1917-1940)[1]

FORWARD

by Chief of the General Staff, Marshal of the Soviet Union M. V. Sakharov

The collection *Voprosy strategii i operativnogo iskusstva v sovetskikh voyennykh trudakh (1917-1940)* [Problems of strategy and operational art in Soviet military works] acquaints the reader with the most significant works revealing the content and development of the strategy and operational art of the Soviet Army and Navy up to the Great Patriotic War.

This is the first time that such a collection has been published. Many of the scientific works contained in it are not known to the modern generation of officers, inasmuch as during Stalin's cult of personality they were destroyed or preserved in single copies. Nevertheless, in them the basic tenets of Soviet military-theoretical thought are distinctly formulated.

It should be emphasized that Soviet military theory is reflected not only in military-scientific works. It was developed in the practical activity of prominent Soviet military leader's and military personalities, who put out scientific works in the field of strategy and operational art. Among them, I. E. Yakir, V. K. Blyukher, A. I. Sedyakin, R. P. Eydeman and others played a notable role.

A number of instructions, handbooks, directives, and manuals, in which the principles of conducting battle and operations were set forth, were produced with the participation of these eminent military leaders, who occupied high positions in the army and navy. Analyses of maneuvers and war games, proposals and instructions of military leaders—all this developed the theoretical tenets for the use of armed forces in war.

In order that the reader more thoroughly understand the materials in the given collection, I would like to briefly examine the overall course of development of Soviet military-theoretical thought up to the Great Patriotic War.

On the day after the victory of the Great October Socialist Revolution, the practical tasks of organizing the defense of the gains of the proletarian revolution against foreign enemies and domestic counterrevolution lay before the Communist Party and the Soviet country. The old Russian army was not suited for this. It was necessary to organize new armed forces, which, in their class make-up and ideological preparation, would conform to the aims of the proletarian revolution, and would be capable of protecting the Soviet State. It was necessary also to develop principally new theoretical foundations for the development of the army, its combat preparation, and the conduct of combat operations. These difficult tasks were not immediately resolved by the Central Committee of the Party, headed by V. I. Lenin, but in the course of the war, on the basis of its experience in accordance with the critical requirements of the situation.

Not only organizational problems of the development of the Soviet Armed Forces arose in a new way at that time. Combat leadership required no less attention. The features of the military-political situation, equipment, supply, limited materiel potential of the Red Army, inadequate experience of command personnel, low level of combat preparation of the troops, and many, many other things—all these affected the forms and methods of conducting armed combat. Thus, in the fire of the civil war not only were the Soviet Armed Forces created, but also new foundations of military art were developed.

In the course of the civil war the most important tenets concerning the nature and character of modern war and factors which would provide victory in war, theoretically worked out by Lenin even before the October Revolution, were fully confirmed and received further development. Creatively developing Marx' and Engels' study on war and the army, Lenin substantiated a number of decisive features of modern wars.

The springboard of Marxist-Leninist study on war and the army was Lenin's position on the social essence of war and its class nature, which included a basic difference from Clausewitz' well-known formulation: war is the continuation of politics by violent means. Lenin taught that war is the continuation not only of foreign, but also of domestic politics of states, which are conditioned by the social system and by class interests. The place and role of politics and strategy in war, its preparation, and its leadership are determined by this. Politics not only determine the aim of the war, but also guide the war for its entire duration. Military strategy is enlisted by the armed forces to achieve its assigned goal.

But modern wars are not limited to armed combat. They encompass all fields of activity of a state. In some form or another broad masses of the population participate in war. The struggle is also conducted in the field of economics, diplomacy, ideology, etc. It is apparent that only the consolidation of all activities of the state into a single organ of leadership in the course of the war will make it possible to conduct it most successfully (the Council of Worker and Peasant Defense in the civil war, the State Defense Committee in the Great Patriotic War).

In practice, this unity of war leadership was implemented by the Central Committee of the Party, headed by V. I. Lenin in the course of the civil war, and by the Central Committee of the Party in the Great Patriotic War. Already in 1918 the Central Committee of the Party established that all "policies of the war department, and all other departments and institutions, are carried out on the precise basis of general directives issued by the Party in the person of the Central Committee and under its direct control."[2] This position on the leading role of the Party in the military development of the army and its combat activity, proceeding from Marxist-Leninist study on war and the army, was of primary significance in the achievement of victory, and became one of the most important principles of Soviet military science after the civil war. Experience in the development of the Soviet Armed Forces and their combat leadership in the several years that followed fully confirmed the correctness of this tenet.

In the Party program adopted by the XXII Congress, it was noted that "the primary foundation of military development is the leadership of the Armed Forces by the Communist Party, and the increased role and influence of Party organizations in the army and navy."[3]

Marxism-Leninism examines not only the social essence of war, but also what distinguishes war from other forms of struggle. Lenin wrote:

> . . .armed revolt is a special type of political struggle, subject to special laws which must be considered attentively. Karl Marx expressed this truth in a remarkably bold way, writing that armed 'uprising, like war, is an art.'[4]

The Communist Party always attached great significance to the study and mastery of this art as one of the most important factors of victory in war. Already in 1905 Lenin indicated that

> not one Social-Democrat who is even barely familiar with history and who has studied this theme of Engels can ever question the enormous significance of military knowledge, the enormous importance of military equipment, such as guns, and military organization, which the masses and classes of people use to resolve great historical conflicts.[5]

Lenin subsequently returned to this theme more than once, emphasizing the necessity of using all experience and military learning of the past, critically reworking and interpreting them. Lenin said that without military science and without using military knowledge, victory was impossible.

In this respect one of the most important problems was the use of military specialists of the old army in the interests of the new Red Army. On the one hand, the old intelligentsia was the bearer of achievements and experience of bourgeois science; on the other hand, it was burdened with a petty bourgeois world view and conservatism created by education and the entire tenor of life. And in the Soviet Armed Forces the role of the leader and commander is especially crucial. Consequently, the problem of creating prepared and experienced officer cadres became exceptionally important.

It should be noted that a complete misunderstanding of the problem of using military specialists, their military knowledge, and their combat experience was characteristic for the "military opposition," which came forth before the VIII Congress and at the Congress itself. Overcoming this "opposition" created the necessary foundations for strengthening the combat capabilities of the army, its development and successful combat activity. Resolutions of the VIII Party Congress on military issues played an exceptional role in this respect. They were based on Lenin's instructions that our army was to be trained, armed, and organized according to the latest word in military science and technology. Only under these conditions could it fulfill its missions for protecting the socialist Fatherland. The use of experience of modern wars, the accumulation of knowledge of bourgeois military science, and the critical reworking of this without weakening the struggle against bourgeois ideology—all this required strict application of the Marxist-Leninist method in the field of military-scientific knowledge.

Attaching great significance to a scientific approach to the resolution of tasks before the Party in all fields of development of the Soviet State, including the military field, Lenin steadfastly demanded of military workers that they study military affairs and in all possible ways increase the quality of military leadership. With the development of military affairs, the role of science in this increases as well, and leadership methods become more complex and improve. And only those military leaders who master solid military knowledge and a broad world view, and who correctly use the Marxist-Leninist method will be capable of successfully resolving their missions.

Lenin's guidelines, duly noted in the resolutions of the VIII Party Congress, became the principal requirements in the development of our army, the preparation of its cadres, and the development of Soviet military-theoretical thought.

In determining the nature and essence of military art, Engels, and Lenin after him, indicated that the methods of conducting war change and depend on the level of production and the development of technology, and that each epoch has its own corresponding military art and its own method of conducting war. But within the limits of a given epoch there is not a single strategy which is common for all countries and people. Strategy is determined by politics; it is concrete and depends on the level of the economy of the given state, its social system, geographic position, condition of the armed forces, population, and materiel capabilities, and on those very features of the states of probable enemies. The development of Soviet military art, in turn, was determined by all these data.

The civil war proceeded on a weak economic base, with the absence of new military-technical assets and a large shortage of trained command personnel. Under conditions of devastation, hunger, and cold, Soviet troops experienced great difficulties, and trained on the battlefields on the basis of experience of battles won and lost. Together with this, the emancipation of creative labor forces as a result of the Great October Socialist Revolution could not fail to affect the course of military actions and the development of Soviet military art. Revolutionary enthusiasm of the working masses attached to old forms of combat operations qualities inherent in the struggle of the proletariat—decisiveness, boldness, and dynamism based on a profound faith in their strength and the greatness of the goals of the proletarian revolution. Therefore, it is not by chance that decisive forms of combat operations of the Soviet Armed Forces—flank strikes, envelopment, encirclement, and others—were displayed in the course of the civil war with an upsurge never before seen. In the course of the civil war Soviet military art arrived at a wide expanse of maneuverability, which, as M. V. Frunze justly observed, was the result not only of purely objective conditions of the civil war, but also of the intrinsic features of the Red Army, its revolutionary spirit, and its class nature.

The great experience of the civil war, then critically generalized, served as a basis for the subsequent development of Soviet military theory. Lenin's direct leadership in the defense of the Soviet Republic, the creative generalizations he made of the experience of past wars, especially the civil war, and his statements and directives concerning the most important issues of defense and the development of the Armed Forces played a decisive role in this.

The conditions of the civil war did not allow for weighty theoretical generalizations about the experience of conducting combat operations. Nevertheless, military-theoretical problems, although in their limited aspect, were studied at that time as well. Here researchers attempted to analyze and theoretically generalize everything new which the Great October Socialist Revolution and the civil war had introduced into the field of military science. In 1919 the 5th Army (commanded by M. N. Tukhachevsky) on the eastern Front came out with its first collection, *Grazhdanskaya voyna* [The civil war] which contained **"Soobshcheniya po strategii grazhdanskoy voyny, chitannyye sotrudnikam shtaba 5-y armii"** [Reports on the strategy of the civil war given by staff workers of the 5th Army].[6] In this collection are examined problems of preparation and conduct of operations in the civil war. Almost all *fronts* in 1919-1920 published their own military-scientific journals. At the end of 1919 M. N. Tukhachevsky gave a lecture on strategy at the Military Academy,[7] in which the experience of the civil war in this area was generalized. In 1920 this lecture was published in a separate pamphlet in Rostov-na-Donu.

In the period of the civil war, scientific research and generalization could not be shaped in the form of official documents, regulations, and manuals. Manuals and regulations which were published at that time were, in essence, the manuals of the old Russian army, reprinted with minor changes.

After the end of the civil war, the possibility of developing military-technical work more widely presented itself. Its main content was the universal study and generalization of the experience of the civil war and world war, taking into consideration the conditions assumed for future imperialist wars against the Soviet Republic.

The practical activity and printed works of M. V. Frunze had particular influence on the development of Soviet military-theoretical thought in the first half of the 1920s. A talented organizer and military leader in the civil war, and then leader of the war department, Frunze provided the theoretical grounds for the most important problems in the development of the armed forces and preparation of the country for defense. He considered the achievement of a uniformity of opinions on the basic issues of military development, methods of combat preparation, and means of conducting combat operations to be the decisive condition for a high level of combat might. Frunze set forth these ideas in the article **"Yedinaya voyennaya doktrina i Krasnaya Armiya"** [Unified military doctrine and the Red Army], and in **"Doklad na soveshchanii komandnogo i komissarskogo sostava Ukrainy i Kryma v marte 1920 g."** [Lecture at the meeting of the command and commissar personnel of the Ukraine and Crimea in March 1920].[8] The positions stated in these articles elicited sharp and heated arguments. This was natural. The establishment of a uniformity of views on the basic issues of the development of the army and military art had enormous educational significance, and became a vital necessity and basis for the conduct of the military reforms of 1924-1928. Together with this, erroneous conclusions on the possibility of creating a new theory of proletarian military art at that time and in that situation came to light in the discussion process. Lenin came out against the untimeliness of such conclusions, warning about the danger of falling into communist self-conceit.

Concerning the nature of future war, Frunze said that war would have a class character and would inevitably aggravate the class struggle within the hostile capitalist state that initiated the aggression against the Soviet Republic. Without rejecting the possibility of lightning strikes, he also considered that future conflicts would lead to a protracted war.

In evaluating the nature of operations in a future war, Frunze proceeded from an assumption of its high degree of maneuver; however, he did not exclude the possibility of using positional forms of conducting war as well on individual sectors. Steadfastly cultivating the idea of maneuver, he viewed this as one of the ways of overcoming the military-technical superiority of our possible enemies.

Frunze put the defense and offense in close connection with maneuver. He came to the following conclusions: all other things being equal, the offense is more advantageous than the defense; as its mission, the defense has to provide for successfully shifting to the offense; the Red Army must be educated in an offensive spirit.

Frunze's views had a great influence on the development of Soviet military-theoretical thought in the mid-1920s. They were reflected in official instructions, particularly in the *Field Regulation of 1925*, in the instructions **"Vyssheye komandovaniye"** [Higher command], approved by Frunze and published in 1924, and in combat manuals for infantry and other combat arms which came out in 1924. The publication of these documents had enormous significance for establishing a uniformity of opinions in the field of operational-tactical thought.

Much work on the reorganization of our Armed Forces was conducted with Frunze's direct participation; this work came into history under the title of Military Reform. These measures concerned all aspects of the military organism. Primary attention was directed toward mobilizational readiness, coordination of operational-strategic proposals with the actual capabilities of the state, and toward the raising of the combat capability of the country on the whole.

In the first order, a reorganization of the central military apparatus was carried out. All functions not peculiar to the Staff of the *RKKA* [Workers' and Peasants' Red Army] were singled out. Here, Frunze indicated that the working out of operational issues and mobilizational plans should be carried out with consideration of the economic, political, and strategic capabilities of the Soviet Union. In his opinion, this operational staff should become "not only the brains of the Red Army—it should become the military brain for the entire Soviet State and should supply the material which will be the basis of the work of the Defense Council."[9]

In 1925 the Directorate for Research and Use of War Experience was created as part of the Staff of the *RKKA*. In a short period of time it published many valuable military-historical works, thereby creating a base for potential development of military theory. The rejuvenation of the central apparatus of the War

Department also was of substantial significance. Young cadres with experience in the civil war, who had graduated from the Military Academy and Higher Academic Courses, came to the Staff of the *RKKA* and the main directorates. They brought along a freshness, inquisitiveness, and boldness of thought, will and energy in work, and a passionate loyalty to Soviet power. The attraction of young officers and the simultaneous broad use of the experience of senior cadres made it possible to successfully combine theory with practice in the work of the central apparatus and attach a purposeful nature to it.

In that period the army was structured according to a territorial militia principle. In 1926 territorial formations comprised 65% of all Soviet Armed Forces. This fully answered the demands of the Party program and the resolution on the military question adopted by the VIII Party Congress. A mixed system of cadre and militia formations was put at the foundation of the development of the Armed Forces. In practice, the mixed system was conditioned by the military budget, consideration of reliable and operationally efficient protection of the country, and considerations of the mobilization plan for supporting the deployment of the necessary number of first-line divisions and for creating a sufficient reserve of a militarily-trained contingent of men in the country. The needs of the economy were also taken into account: short periods of time for combat preparation in territorial units of the Red Army did not tear men away from their practical activities.

In the 1920s the Military-Scientific Society [*Voyenno-nauchnoye obshchestvo/VNO*], created on 13 October 1920 as part of the Military Academy of the General Staff, had a prominent place in military-scientific work. It had as its task the study and use of experience of class war in the epoch of the proletarian revolution.

The creation of this society was dictated, in particular, by the fact that academic instruction was removed to a considerable degree from reality, i.e., it bore an abstract nature. The professor-instructor staff, consisting almost entirely of military specialists from the old army, were not able to restructure themselves. In 1920 there was not yet a course given on the history of the civil war, or even on the history of the world war on the Russian front.

Moreover, the student body of the academy had sharply changed. There were more than 50% workers and peasants and as much as 80% communists in it who had much combat experience in the civil war, and some with experience in the world war; they needed practical preparation for military operations in a new situation on the basis of an all-round comprehension of the experience of the latest wars from new, Marxist-Leninist methodological positions. This is why the Military-Scientific Society became widely recognized and its activities were very useful. Together with this, it personified the struggle of the new against the old, a progressive attempt to coordinate theory with revolutionary practice and to develop military affairs and art on the basis of Marxist-Leninist study on war and the army. These extensive tasks led the young military-scientific cadres onto the broad path of creative generalization of the experience of the past, and of scientific searches for the new in accordance with the changed social situation in the Soviet Republic.

The Military-Scientific Society created its own periodical printing organs and published collections and other literature. Having originated in the Academy of the General Staff, it soon embraced other military academies and troops throughout the entire territory of the Soviet Republic with its own departments and organizations. For the purpose of unification and guidance of *VNO* activities, in May 1925 an all-union conference of departments of this society took place, at which the provisional Central Council of the *VNO* was created, headed by Frunze. The society became a broad, mass organization, and by 1926 an all-union congress of this society took place. Among those who gave papers at it were M. N. Tukhachevsky—**"Voprosy sovremennoy strategii"** [Problems of modern strategy]; V. K. Triandafillov—**"Razmakh operatsiy sovremennykh armiy"** [The scope of operations of modern armies]; S. S. Kamenev and R. S. Tsiffer—**"Osnovnyye voprosy sovremennoy taktiki"** [Basic problems of modern tactics]; and S. A. Pugachev—**"Osnovy podgotovki strany k oborone"** [Foundations of preparing the country for defense]. These and other talks reflected the success of Soviet military-theoretical thought. The congress not only summed up the military-theoretical work of the past, but also noted prospects for its future development.

By this time many military-theoretical works had come out, which made it possible to more fully generalize the rich experience of the latest wars. Included among these were the works of V. Novitsky, I. Vatsetis, A. Bazarevsky, A. Zayonchkovsky, B. Shaposhnikov, A. Kolenkovsky, and others on World War I, and the works of M. Tukhachevsky, A. Bubnov, S. Gusev, V. Melikov, N. Kakurin, G. Gay, Ye. Shilovsky, N. Varfolomeyev, and others on the civil war.

One of the most important results of studying the experience of previous wars was the theory of conducting successive operations. In his work *Pokhod za Vislu* [The campaign for the Vistula] published in 1923, Tukhachevsky laid the foundations in the following way:

> . . . the impossibility in the presence of modern wide fronts to destroy an enemy army by a single blow compels us to achieve this by a series of successive operations. . . . A series of annihilating operations, introduced successively and combined by uninterrupted pursuit, can replace the annihilating engagement, which in former armies was a better type of combat.[10]

This theory of successive operations received further development in a number of military-scientific works of the 1920s, especially in the works of N. N. Mochvin,[11] N. Ye Varfolomeyev,[12] V. K. Triandafillov,[13] and others. The authors of these works considered that successive operations always had and will have superiority, inasmuch as they make it possible to shift from one particular target to another, while at the same time maintaining unity of a common goal. They also considered that with an average duration in that period of 6-7 days, an army operation could have a depth of 75-90 kilometers, while a *front* operation could be within the limits of as much as 200 kilometers. The opinion was stated that a grouping of army operations should directly evolve from the plan of the *front* command. The study of the problem of conducting successive operations was, to a certain degree, a prerequisite for the subsequent development (in the 1930s) of the deep operation.

A very substantial phenomenon which affected the successful development of military-theoretical thought in the 1920s was the separation of operational art from the field of strategy and its becoming an independent field of military theory. The two-part formula "strategy—tactics," which had been dominant until the beginning of the 1920s, was divided into three parts: "strategy—operational art—tactics." This most favorably affected the entire methodology of teaching and studying urgent problems of military art. A separate department, "Conduct of Operations," was created in 1924 at the Military Academy. Before, lectures on the conduct of operations made up only part of the overall course on the conduct of war, i.e., strategy in its former understanding. The creation of such an independent academic discipline made it possible to approach the all-round study of preparation and conduct of operations more thoroughly. The system of successive operations was a subject in the study of operational art of this period.

According to N. Ye. Varfolomeyev, this system was characterized by the following design: goal of operation—annihilation, complete rout of enemy personnel; method of operation—uninterrupted offensive; means—prolonged operational pursuit, avoiding pauses and stops, implemented by a series of successive operations, of which each is an intermediary link on the path to the ultimate goal, which is achieved in the final, concluding, decisive operation.[14]

Another component of the investigation of the modern operation was the study of its materiel support. This was especially furthered by the assimilation of the experience of the Soviet-Polish campaign of 1920. In the system of successive operations, which did not allow pauses or stops, materiel support acquired particular significance. However, both in academic study and in operational problems and games, materiel calculation for conducting an operation still did not receive the attention it deserved. The experience of past wars demonstrated the continuously increasing role of the rear in war. The problem of organizing the rear and its particular significance in preparing the defense of the country and in combat operations became one of the most important tasks of strategy and operational art. M. V. Frunze in his talk at the Military Academy in 1924 focused special attention on this and demanded that the study of problems in organizing the rear and supply be included in strategy. For this purpose, according to Frunze's instructions, a special department of supply was created at the Military Academy in 1924. It was called upon to prepare highly-qualified workers for the operational rear, with a large strategic world view, capable also of directing the preparation and mobilization of the national economy in the interests of the country's defense.

The theoretical development of issues of organizing and conducting operations was improved in its subsequent evolution in full accordance with the changing materiel-technical base and with the conditions of the development of the Armed Forces of the Soviet State. Issues of operational art at the end of the 1920s were most fully reflected in Triandafillov's work, *Kharakter operatsiy sovremennykh armiy* [The nature of operations of modern armies], published in 1929.[15] A characteristic feature of this book is the author's attempt to avoid general discussions. The author substantiates his theoretical generalizations and conclusions with concrete practical data—the materiel condition of the Red Army and armies of probable enemies, and tactical and operational norms which are probable under those conditions. In his theoretical conclusions the author at-

tempts to demonstrate in which direction military affairs were developing. It is in this that the scientific value of the book lies.

Regulations and instructions published in that period were practical handbooks on training and combat preparation of troops, and reflected the corresponding level of their materiel support. However, at the same time they proceeded in their principal tenets from the prognosis of an increasing influence of technology and its role in future wars (in the new *Field Regulation of 1929*, much attention was focused on the role of tanks and aviation in future wars. The long-range tank group was introduced, the significance of massed aviation was emphasized, and problems of antiair, antitank, and anti-chemical defense were posed).

But if in the field of the formation and development of operational art in the 1920s a certain uniformity of views and opinions on its basic problems was observed, then this was not so in the field of military strategy. There were many reasons for this. Among them, the most substantial was the fact that after the October Revolution and the creation of the Soviet State the correlation of social forces in the international arena and within the State, as well as the correlation of possible military groupings, had profoundly changed, and strategy in its broad understanding required a radical reworking on the basis of Marxist-Leninist methodology. Here a single consideration of past experience alone was not adequate. As an example, the "Strategy" course which Professor A. A. Svechin taught at the Military Academy (and then published in a separate book) can be used as a model. In the section where the problem of conducting armed combat on fronts was examined, the author provided useful material, but as soon as he began to discuss the preparation and conduct of war as a whole, he fell into scholasticism. An active follower of the well-known German historian Hans Delbrueck, an advocate of the superiority of the "strategy of attrition" [*strategiya izmora*], the idealist Svechin was not able to go further than generalizations of the experience of the latest wars and strategic theories of his predecessors. He was not able to understand the new phenomena in our social life and in the development of the Soviet State and its Armed Forces; he did not perceive the prospects of their development or, consequently, the possible development of military art. He attempted to provide a general, abstract strategy valid for any country. His thinking, although sometimes original, remained conservative in its spirit. Nevertheless, Svechin's book in essence was at that time the single, unclassified serious work on strategy.[16] It was broadly disseminated and had a positive effect on the development of issues of military theory, if only that it provided a great deal of material for thought and discussions, at times very keen and long, in the process of which a correct Marxist-Leninist understanding and interpretation of the actual essence and tasks of military art were worked out.

Most of all, arguments emerged around the issue of the "strategy of attrition" [*strategiya izmora*] and the "strategy of annihilation" [*strategiya sokrusheniya*].

According to Svechin's definition, the strategy of annihilation attempts to achieve the assigned goal by means of a single rush, and it views a series of successive operations as a single whole. The strategy of annihilation strives for decisive victories by means of an annihilating rout of enemy personnel. It operates by means of elements of speed and direct linearity of operations, and by means of the enormity of the blow. A general engagement is not viewed as a means of conducting war; it is of self-sufficing significance. Everything is subordinated to the basic idea of the strategy of annihilation, which should assure decisive success. And the strategic line of conduct is determined by this.

The "strategy of attrition" is based on the gradual exhaustion and weakening of the enemy. It combines the successive resolution of limited missions with flexible tactics of maneuver to create the necessary superiority in the interests of the latest decisive blow. Here, it is not the destruction of enemy personnel (this is only part of the mission of an armed front), but the weakening of the enemy in every possible way, politically and economically, which has prevailing significance. The line of conduct of the strategy of attrition in war is determined by this.

In essence, these categories in Svechin's definition were a particular treatment of Clausewitz' well-known tenets on wars with decisive and limited aims as applied to the new conditions of the twentieth century. However, in the widely developed discussion they acquired a different interpretation and began to be viewed in the light of the nature of future wars and tasks of revolutionary armies. In this aspect the primary objections against the strategy of attrition were reduced to the fact that it was directed against decisive, revolutionary, offensive wars which would be supported by an outburst of exacerbated class contradictions in the enemy camp. But the advocates of the strategy of annihilation had to admit, all the same, that under those conditions

of conducting war it was necessary to be oriented not toward lightning, annihilating blows, but prolonged, stubborn war, which could not always be a mobile one, and one in which the tasks of exhausting the enemy were to play no small role.

Generally speaking, it is foolish to juxtapose the above-mentioned categories of strategy one against the other. The one-act Napoleonic annihilating blows had already long ago retreated into the realm of history. Modern wars do not adhere to a single method of conducting war, and "annihilation" and "attrition" as strategic forms can even complement one another and be changed in the course of a war. But all the same, this discussion, which at that time took on a broad character, in sum furthered the strengthening of an offensive beginning in Soviet military doctrine and confirmed its superiority over the defense. It led to further development of opinions, already stated by Frunze, on the necessity of educating army cadres in the spirit of a maneuver strategy, dynamism, initiative, and decisive actions in offensive operations.

There were also presentations on the advantages of a defensive form of operation as a method of armed combat with an insufficiency of forces and poor organization of the rear. But these views did not meet with great support. A. I. Verkhovsky, for example, came forward with such a position. Having joined together concepts which were varied in their content—the defense as a form of combat operation, and defensive war in a political regard—he came to the conclusion that a defensive engagement provides enormous political advantages and makes it possible to build up forces. From this point of view, he concluded, it is more advantageous for us to give up Minsk and Kiev in the first battles than to take Belostok and Brest. The strong choose "Cannae," the weak—"Poltava." Such a strategic concept, which was in sharp contradiction to the spirit of Soviet military doctrine, was, of course, decisively rejected.

At that time bourgeois military science was experiencing a severe crisis. In searching for expedient forms of developing armed forces, bourgeois military writers proceeded from two positions: an attempt to make maximum use of growing military technology, and a fear of creating and arming mass armies. On this basis there arose the popular (at that time) theories of de Gaulle, Sekt, Zoldan and others on the expediency of organizing small, professional, select armies, well armed and capable of being the support for the bourgeoisie and the primary force for deploying a mass army in a future war. Other theories, e.g., Douhet's and Fuller's, overstated the significance of technology in future war. They correctly noted the great role of large aviation and tank formations in future war, but completely incorrectly assumed that aviation and tanks would be able to decide the outcome of a war in a short period of time by means of independent operations.

In reality, not one of the capitalist states set off on the path of these modernist theories; in general they did not find their place in our military-theoretical thought either. Some prominent military writers who did not stand on Marxist-Leninist ideological positions attempted, nevertheless, to substantiate the possibility of substituting in future wars a mass army by a small, technologically equipped and select (with regard to class) army of "knights."[17]

Basing itself on the development of military technology abroad in the 1920s and on the outfitting of the Red Army with it, our military-theoretical thought correctly oriented itself on the profound effect which new military technology could have on the structure of the army and on military art. But at the same time it did not reject the principle of mass armies. It should be noted that already by the end of the 1920s the army had been considerably strengthened by new and modern forms of artillery weapons, which sharply increased its fire power.

The five-year plan for industrialization of the country, adopted by the XVI Party Conference in 1929, made it possible to envision the real possibility of reorganizing the army in the near future on the principles of broadly mechanizing it and equipping it with aviation technology. The technical rearmament of the army, which had already commenced, played an exceptional role in the development of Soviet military theory, which then led to the broad development of deep operation.

The rudiments of the tactics of deep battle could be seen in the lectures of Tukhachevsky at the end of the 1920s, the works of Triandafillov, and in the articles of I. P. Uborevich. Tukhachevsky and Triandafillov, in special lecture notes, substantiated the requirement that the Red Army be equipped with tanks and aviation for the purpose of more successfully conducting combat operations. Triandafillov considered it expedient to have three tank echelons (direct support, long-range support, and long-range), which would make it possible to attack the enemy on the entire depth of his battle formation. In 1929, Uborevich evaluating the tactical-technical properties of tanks, indicated the possibility of boldly and swiftly striking the enemy's battle

formation in the shortest possible time and over the greatest depth.[18] Thus, Soviet military-theoretical thought, outdistancing the development of the economy of the Soviet State, provided the army with a purposeful perspective.

A significant phenomenon in the development of Soviet military-scientific work in this period was the creation of the military section at the Communist Academy, which began its planned work in 1929 and played a notable progressive role. It was headed by the well-known Party and military personality, A. S. Bubnov, and members of its presidium included M. N. Pokrovsky, Ya. B. Gamarnik, I. P. Uborevich, R. P. Eydeman, K. A. Mekhonoshin, and A. M. Vol'pe. The mission of the military section was to consolidate the Marxist-Leninist cadres of different specialties who were working on military-theoretical and military-historical problems.

Two primary factors in these years had a direct influence on the development of Soviet military-theoretical thought. A powerful socialist industry began to develop successfully in the country, and the collectivization of agriculture was successfully initiated; this created a new, broader materiel-technical and social base for the Soviet Armed Forces. At the same time, the threat of a new armed attack against the Soviet Union intensified. The XVI Congress of the CPSU, which met in 1930, emphasized the increasing preparation of the imperialists for war against the USSR. All this demanded new, broad military-theoretical research. M. N. Tukhachevsky wrote at that time:

> we, of course, cannot remain at the former level of our military-theoretical thinking . . ., we cannot fail to take the five-year plan into consideration in the Red Army's theory of military affairs . . ., [we cannot fail] to react to it with the appropriate restructuring of military-theoretical tenets.[19]

Military-theoretical thought at that time proceeded from the following general political line,which was written into the *Field Regulation of 1936*:

> Any attack against the socialist state of workers and peasants will be repelled with all the might of the Armed Forces of the Soviet Union, with a transfer of military operations to the territory of the enemy who has attacked. Combat operations of the Red Army will be conducted for annihilation. The achievement of a decisive victory and the complete destruction of the enemy are the primary aim in a war into which the Soviet Union has been drawn.

Soviet military-theoretical thought visualized future war as an armed conflict of enormous, million-man armies in which the opposing sides would pursue decisive goals—the complete annihilation of the enemy. War would attain a colossal scope and force. It could not be a *Blitzkrieg*, i.e., it could not be decided by a single, albeit gigantic strategic operation. It was considered that armed combat would consist of a number of successive blows which would form a system of successive operations of enormous strategic significance. Soviet military thought came to the conclusion that mass armies which had been deployed would form a continuous strategic front, with its flanks up against inaccessible areas (seas, neutral states, etc.).

From all this it follows that tested forms and methods of armed combat based on the experience of past wars and the old materiel-technical base, even if old equipment were modernized, could not be used without changes to achieve victory. There arose the necessity of using those forms and methods of armed combat which would make it possible to surmount the strong fire of a continuous front and destroy the enemy's operational groupings in the interests of achieving strategic success. "The main and primary mission of military art," wrote A. I. Yegorov, Chief of Staff of the *RKKA*, "is to prevent the formation of a continuous front by applying an annihilating blow and swift tempo to operations and battle."[20] This meant an attempt to give armed combat a maneuver character and to avoid a positional war. Soviet military thought acknowledged the most effective method of resolving this task as being that in which blows of enormous penetrating power were inflicted against the enemy on the entire depth of his formation. Inflicting such blows would be possible only with the help of deep echelonment of the mass of interacting rifle troops, tanks, and artillery, supported by aviation. This method of combat operations acquired the name of deep operation.

The deep operation as a process included several stages: penetration of the tactical defense by the joint efforts of infantry, tanks, artillery, and aviation, and the formation of a breach in it; development of tactical success into operational success by means of introducing a mass of tanks, motorized infantry, and mechanized cavalry through this breach, and also by means of landing air assaults (the routing of reserves and the elimination of the enemy's operational defense); the development of operational success (operational pursuit) until the complete rout of the enemy grouping selected as the objective of the operation, and the occupation of a

favorable initial position for a new operation. The first stage is the foundation of deep operation, since without the penetration of the tactical defense, deep operation, in general, cannot take place, i.e., it is thwarted. But its essence consists of the fact that interacting artillery, tanks (several echelons), aviation, and infantry deliver simultaneous strikes against the enemy battle formation on his entire depth, as if to penetrate his defense with a single, deep and powerful surprise blow, forming a breach in the defense and then attempting to arrive at operational space. Here, all combat arms operate in the interests of the infantry.

The main thing in this method of offensive battle is a rejection of linear forms of combat, i.e., not striking the enemy on a line of direct contact and pushing him back, but rather pressuring him deeply, expressed by simultaneously destroying, suppressing, and pinning down the enemy's main grouping, encircling it, and completely routing him.

The second condition for the success of deep operation is the arrival of mobile troops (tanks, motorized infantry, mechanized cavalry, air assaults) at the operational depth of the enemy defense. Only under this condition could a stationary front be penetrated from within; only by using rifle troops and direct-support and long-range tanks could a maneuver character be given to armed combat.

In accordance with this, it was considered that the operational formation of a strike group should always include the following: a penetration echelon consisting of rifle troops (reinforced rifle corps); an echelon for the development of the penetration, consisting of mobile troops (tanks, motorized infantry, motorized cavalry), and having great mobility and shock force; an aviation group and an air assault group. It was recommended to create shock armies (corps) on the main direction, generously outfitted with combat equipment, transport, and communications assets. Another important condition for success of the main operation was gaining superiority in the air, isolating the region of the engagement from approaching enemy reserves and preventing the delivery of materiel to his troops which are being attacked.

The theory of deep operation affirmed the method of conducting an operation in which activities of shock, holding, and other groups, and penetration echelons and echelons for developing the penetration,[21] which were not tactically connected with one another, are combined with respect to the front and in the depth, on the ground and in the air, into a strike mechanism which provides for a single purposeful action against the enemy's operational grouping until its complete rout. Here, possible forms of operational maneuver in offensive operations could be a frontal strike, a strike on converging directions (dual penetration using a favorable front configuration), a combination strike—the organization of several strikes of varied strength on a broad front (so-called "splintering strikes" [*drobyashchiy udar*]), envelopment (of one or both flanks), and encirclement. All these forms of operational maneuver subsequently found wide use during the Great Patriotic War.

Such, in general outline, is the theory of deep operation, or, in other words, the theory of deep forms of armed combat. Its practicality was assured by the materiel-technical base created by the rapidly developed industry of the Soviet Union.

The technical instruction of the army in all fields of development attained great success. By 1939 its overall result was reflected by the following indicators, which were cited in the speech of the People's Commissar for Military and Naval Affairs at the 4th session of the Supreme Soviet in 1939: the number of tanks from 1930 rose 43 times; aircraft—6.5 times; heavy, medium, and light artillery—7 times; antitank and tank artillery—70 times; machine guns—5.5 times. If in 1930 for each soldier 3.7 horsepower was needed, then in 1939, 13 horsepower was needed, despite the fact that during this time the overall numbers of the army increased 3.5 times.

At the same time, the system of development of the Armed Forces was also reexamined. On 1 September 1939, by law of universal military service, a rejection of militia-territorial formations and a complete shift to a cadre army was implemented. By 1936 the number of army cadres amounted to 1,300,000 men, and by 1937—1,433,000 men. The majority were workers and collective farmers who had obtained a general education and were familiar with various kinds of equipment.

Thus, Soviet military theory, reflecting the practical work of the development of the Armed Forces, remained the theory of a mass army equipped with the latest technical means of combat.

The theory of deep forms of armed combat occupied an important place in the scientific preparation of officer cadres in the 1930s. The operations department of the Frunze Military Academy, and then the General

Staff Academy, as well as the Directorate of Combat Preparation, focused much attention on the systematization of its tenets and to applied and calculated formation (as applied to the *front* and army).

In February 1933, the Red Army had already obtained an official manual, *Vremennyye ukazaniya po organizatsii glubokogo boya* [Provisional instructions for organizing deep battle]. It was issued under the leadership of the Chief of the Directorate for Combat Preparation, A. I. Sedyakin, and published by the General Staff.

In 1936 a new Field Regulation came out *(Provisional Field Regulation-36)*, in which the tactics of deep battle and some elements of deep operation were already reflected. The field regulations were worked out under the direct leadership of Tukhachevsky and Yegorov. At that time an operations manual was also being prepared, which, however, never saw the light, in connection with the mass repressions which soon began in the army, engendered by Stalin's cult of personality.

The repressions of 1937 and subsequent years were of enormous harm to the army and to the entire country. They deprived the Red Army and Navy of its most experienced cadres who were prepared in a military-theoretical respect, talented researchers, and highly qualified military leaders. This had a negative effect on the further development of military-theoretical thought. The thorough study of military-scientific problems and the working out of the principal issues of troop leadership were replaced by a narrow, purely applied resolution—creeping empiricism. And strategy as a science and academic discipline, in general, was not studied. All this was a result not only of the unfounded repressions, but also of the blind alley in which social science, including military science, found itself. Military science was essentially reduced to the compilation of a mosaic from Stalin's statements on military issues. The theory of deep operation was subjected to doubt on the basis that Stalin had made no statements about it, and that its creators were "enemies of the people." Such elements as, for example, independent operations of motor-mechanized and cavalry formations ahead of the front and in the operational depth of the enemy were even called "harmful," and for this ridiculous reason they were rejected.

The reasons enumerated above, as well as the incorrectly understood limited experience in Spain in 1936-1939, led at the end of 1939 to the dismemberment of all mechanized corps—the shock forces of deep operation. At the same time, there were attempts to sharply change the missions of aviation, essentially reducing them to operations only over the battlefield in close tactical connection with ground forces conducting the battle.

Such measures attested to the backward turn of military theory to linear forms of combat on an operational scale.

For these reasons Soviet military-theoretical thought could not properly generalize the experience either in the region of Lake Khasan near the Khalkhin-Gol River, or in the war against the White Finns. Of special significance was the experience of the breakthrough of the Mannerheim Line, the success of which was achieved by a structure of deeply-echeloned troop battle formations and uninterrupted intensification of a strike by reserves from the depth. All this underscored the necessity of new organizational forms and methods of using artillery, tanks, and aviation, which had not been implemented.

World War II demonstrated that fascist Germany was using methods of deep operation which had been developed earlier by us. The Germans borrowed the achievements of Soviet military-theoretical thought and applied them, not without success, in the war against Poland and in the West.

Taking into account the experience of World War II, which had already begun, the regeneration of mechanized corps was begun in the summer of 1940. However, time had been lost. Moreover, by the beginning of the war, the army had not yet been rearmed with new materiel of improved design. The majority of tanks, aircraft, and antitank and antiaircraft guns in the border troops were still old models. They were inferior to equipment in the German army with respect to tactical-technical data. This was felt especially keenly in vehicular transport and mechanical towing assets, which sharply affected the maneuver capabilities of the troops.

All this created a definite discrepancy between the practical capabilities of the troops and the theoretical and academic recommendations with respect to their operational and tactical use.

On the eve of the Great Patriotic War our operational-strategic views were most fully expounded at a meeting conducted by the Main Military Council in December 1940. Their basic tenets were formulated in the concluding speech at this meeting by the People's Commissar for Defense of the USSR. It was pointed out that

our armed forces had to be prepared both for operations under mobile conditions and for the penetration of modern, strongly fortified defensive zones. The latter was especially emphasized. The experience of the penetration of the Mannerheim Line in 1940 strongly influenced these instructions, and a conclusion was made that with the modern technical outfitting of armies and means for organizing a prolonged defense, the primary type of offensive operation is the penetration, concluding with the encirclement and complete rout of the enemy. The experience of the penetration of the Mannerheim Line was cited as an example of organizing the penetration of fortified regions. This tenet on the necessity of organizing the penetration of enemy fortified regions was widespread at the initial period of the war as well. Proceeding from the circumstance that a state's borders, especially on the most important directions, are strongly fortified beforehand, and that their envelopment would not always be possible, it was considered that military operations from the beginning of the war would not have the nature of a meeting engagement, but from the very beginning of the war would require the organization of a penetration of the front right up to the fortified region.

The problem of the initial period of the conduct of the war, with its high level of dynamism of combat operations and the struggle for mastering operational and strategic initiative, remained in the shadows. The theory of maneuver operations in the initial period of the conduct of the war was not developed, although by this time there already was the sufficiently large experience of maneuver operations of World War II in the West, including the experience of the positional struggle of the French army for the Maginot Line, on which many hopes had been placed and which, as is known, could not fulfill its assigned mission.

In working out problems of Soviet military theory in our publications, broad maneuver operations and their features were undervalued and did not receive proper illumination. It was considered that maneuver could acquire its development in the enemy's operational depth, after the penetration of his continuous front. Little attention was given to developing methods for conducting defensive operations, particularly a strategic defense, or, in connection with this, methods of conducting combat operations under conditions of withdrawal, encirclement, or breaking out of an encirclement. The process itself of conducting deep operation was limited by a specifically established design, but reality, as we afterward confirmed, turned out to be more varied and more complex, and mainly required of all command personnel, from bottom to top, a high level of preparation, solid skills, and great flexibility in planning and control of maneuver operations and troop activities, especially in the initial period of the war.

The war confirmed the correctness of views on conducting deep operations, in the first order on the use of echelons of operational development of success, especially in 1943, when our offensive operations, in accordance with the situation which had unfolded, began with a penetration of the enemy defense, into which mobile troops, tank armies, and tank and mechanized corps were subsequently introduced.

The Great Patriotic War demonstrated that the basic principal tenets of Soviet military theory were correct. They were founded on a correct prognosis of the nature of future war and, in accordance with this, on a correct system of organizing the Armed Forces and the defense of the Soviet Union.

ENDNOTES

1. *Voprosy strategii i operativnogo iskusstva v sovetskikh voyennykh trudakh (1917-1940)* [Problems of strategy and operational art in Soviet military works (1917-1940)] (Moscow: Voyennoye Izdatel'stvo Ministerstva Oborony SSSR, 1965), pp. 3—24.
2. *KPSS o Vooruzhennykh Silakh Sovetskogo Soyuza. "Sbornik dokumentov" (1917-1958)* [CPSU on the Armed Forces of the Soviet Union. Collection of documents 1917-1958)] (Moscow: Gospolitizdat, 1958), p. 47.
3. *Programma Kommunisticheskoy partii Sovetskogo Soyuza* [Program of the Communist Party of the Soviet Union] (Izdatel'stvo "Pravda"), 1961, p.112.
4. V. I. Lenin, *Sochineniya* [Works], Vol. 26, p. 151.
5. V. I. Lenin, *Sochineniya* [Works], 5th edition, Vol. 10, p. 340.
6. This collection has been kept in Lenin's personal library in the Kremlin. On the title page of the book there is the inscription, "Copy of V. Lenin. 24/IV—1920."
7. See the article in this collection (i.e., *Problems of Strategy and Operational Art in Soviet Military Works 1917-1940*] by M. N. Tukhachevsky, "Strategiya natsional'naya i klassovaya" [National and class strategy].
8. These articles appear in *Problems of Strategy and Operational Art in Soviet Military Works 1917-1940*.
9. M. V. Frunze, *Sobraniye sochineniy* [Collected works], Vol. 11, p. 32.
10. M. Tukhachevsky, *Pokhod za Vislu* [The campaign for the Vistula] (Smolensk, 1923), pp. 25—27.
11. N. Mochvin, *Posledovatel'nyye operatsii po opytu Marny i Visly* [Successive operations on the example of the Marne and Vistula] (Moscow: 1928).
12. N. Varfolomeyev, *Udarnaya armiya* [The shock army] (Moscow: GIZ, 1933). Part of this book is included in *Problems of Strategy and Operational Art in Soviet Military Works 1917-1940*.
13. V. Triandafillov, *Kharakter operatsiy sovremennykh armiy* [The nature of operations of modern armies] (Moscow: Giz, 1929).

14. N. Ye. Varfolomeyev, "Strategiya v akademicheskoy postanovke" [Strategy in an academic formulation], *Voyna i revolyutsiya* [War and revolution], 11 (1928), p. 88.
    (Translator's note: the translation of this article appears in this current collection.)
15. The primary part of this book is given in *Problems of Strategy and Operational Art in Soviet Military Works 1917-1940*.
16. The most interesting sections of this book are given in *Problems of Strategy and Operational Art in Soviet Military Works 1917-1940*.
17. See the section in A. I. Verkhovsky's work, *Kharakteristika srazheniya budushchego* [Characteristics of a future engagement], in *Problems of Strategy and Operational Art in Soviet Military Works 1917-1940*.
18. See I. P. Uborevich, "Operativnoye ispol'zovaniye tankov" [Operational use of tanks] in *Problems of Strategy and Operational Art in Soviet Military Works 1917-1940*.
19. M. N. Tukhachevsky, *O kharaktere sovremennykh voyn v svete resheniy VI kongressa Kominterna. Zapiski* [On the nature of modern wars in light of the decisions of the VI Comintern Congress. Notes], Vol. 1 (Komakademiya, 1930), p. 20.
20. A. I. Yegorov's article is contained in the collection *Problems of Strategy and Operational Art in Soviet Military Works 1917-1940*.
21. In the Great Patriotic War, the echelon for developing the penetration included mobile troops—tank armies, tank and mechanized troops, and cavalry.

SOME ISSUES ON THE DEVELOPMENT OF THE THEORY OF STRATEGY IN THE 1920S[1]

Major General N. Pavlenko

Soviet strategy, as well as all its military science, began to develop during the Civil War, in the course of the severe struggle against enemies within and without. The Communist Party and V. I. Lenin personally focused much attention on the development of the Red Army and of Soviet military science, which had absorbed the rich experience of the revolutionary struggle and the military knowledge and experience accumulated in the bosom of the old society. In March 1920 at the 1st All-Russian Congress of Worker Cossacks, Lenin said:

> You know that it is impossible to learn military affairs immediately. You also know that only the officers—colonels and generals who remain from the tsarist army—know military science. . . . It is necessary to recruit the command staff from former officers, so that the workers and peasants can learn from them, for without science it is impossible to build a modern army.[2]

Among those the officers and generals of the old Russian army who went over to the service of the Soviet State were also military scholars who possessed enormous military knowledge and experience. But together with useful scientific wares, many brought with them into the Red Army outdated views, old traditions, and, mainly, a methodology which was inappropriate for the progressive class, a methodology against which it was necessary to struggle for a long period of time.

A little more than two decades separate the Civil War from the Great Patriotic War. Each of these decades has its own specific features in the development of military-theoretical thought in our country.

The 1920s represent an important stage in the development of Soviet military science. This was the time of its establishment as a science, the method of which was dialectical materialism. The process was suffused with struggle, arguments, and discussions in which not only purely military theory but also methodological issues were drawn in. An important task was overcoming one-sided concepts of foreign bourgeois authors. A thorough study of war experience, the improvement of means of combat and the outfitting of the armed forces with them, discussions on the most important issues of military theory and military history, and mastery by military cadres of Marxist-Leninist methodology facilitated the development of Soviet military-theoretical thought in the 1920s. In these years there were more than a few special works on military strategy. Above all, among these should be included the works of M. V. Frunze,[3] M. N. Tukhachevsky,[4] A. A. Svechin,[5] A. A. Neznamov, [6], A. M. Zayonchkovsky,[7] and others.

Issues on strategic theory were also drawn into works devoted to operational art[8] and military history.[9] The ideas expressed in them make it possible not only to establish the level of strategic theory of this time, but also to determine the degree of its influence on the development of military science in subsequent years.

Soviet strategic theory in the 1920s, in essence, correctly defined the nature of armed conflict in a future war, envisioned a growth in the role of the rear in this, and focused much attention on the development of methods for conducting successive operations into the depth. The foregoing far from exhausted the circle of issues which our military theory was working on. But the strategic theory of this period also had serious shortcomings. Many important issues of military strategy were treated in passing, without thoroughly investigating them. Above all, this applied to issues on the conduct of coalition war, organization of a strategic defense, cooperation of fronts, strategic leadership, and a number of others. Necessary attention was not given to terminology. The terms "campaign," "approach," "strategic offensive," "strategic defense," and others were used, but their definitions very often were not given, which led to various understandings and interpretations.

The 1930s were marked by enormous successes in the development and improvement of means of combat, especially tanks and aviation; the might of the armed forces grew considerably. Serious changes also occurred in the camp of possible enemies. With fascism coming to power in Germany, it became more and more evident that it was namely this state that would be the most probable enemy to perpetrate aggression against our Motherland.

In the 1930s, the cult of personality of Stalin, with all its negative manifestations and consequences, had an increasingly stronger influence on strategic theory, as most closely connected with the political field of knowledge. At first this influence was expressed in the fact that the circle of personalities who were studying strategic theory became extremely narrow. The situation was complicated by the fact that a significant part of the most prepared cadres of military theoreticians was subjected to unfounded repressions. An especially

strong blow was inflicted against that small but very talented group of scholars who were developing strategic theory. This applied to M. N. Tukhachevsky, A. A. Svechin, R. P. Eydeman, N. Ye. Varfolomeyev, and others. Their works not only were placed in doubt, but also were declared as sabotage. Therefore, many interesting ideas on the issue of organizing and conducting the strategic offensive, stated in the 1920s and beginning of the 1930s, were not developed in the second half of the 1930s.

An enormous mistake was also made in the exclusion of the course on strategic theory from military academy programs.[10] This inflicted serious damage on our military science. Finally, in the prewar decade local wars became more frequent, and in 1939 World War II began, which was a severe trial for peoples and states, their armed forces, and various prewar theories. A careful study of all these conditions and an analysis of their influence on the development of strategic theory are one of the tasks of military-historical science.

In the present article the author intends to examine, on the basis of works published at various times, only individual issues in the development of strategic theory in the 1920s, concerning mainly foresight into the nature of armed combat and the theory of the strategic offensive. Of course, even these issues can be examined only in general outlines within the framework of a journal article.

The materiel-technical base, which was the point of departure for the military theory of the 1920s, did not stray far from the level of World War I. It is true that at that time trends and prospects for the development of means of combat were already distinctly exhibited: the improvement of automatic weapons, an increase in the range of artillery fire, and a qualitative improvement in tanks, aviation, means of communication, and transport. Military-scientific thought took into account these trends. But, as always in similar situations, some overestimated the influence of the use of improved means of combat on future battlefields, while others, on the contrary, underestimated it, clinging to outmoded types of forces and forms of combat.

Armies of many millions of men seemed to some foreign theoreticians (Fuller, Sekt, Zoldan, and others) a sheer "nightmare." They dreamed of a small but classically reliable army. These views found their individual supporters even among us. Thus, the author of a generally interesting work stated at the end of the 1920s that "the mass army will disappear, and it will be replaced by a small army of knights [*rytsar'*] which can be structured on classical principles."[11] In these years some military personalities continued after the old way to idealize cavalry, without noting that with the massive appearance of automatic weapons, tanks, and aviation on the battlefield, this once very effective combat arm now had no future. However, theories of creating small armored "knight" armies did not receive dissemination among us. Enthusiasm for cavalry was still unusually drawn out. For a long period of time it was considered "a triumphant and annihilating force,"[12] although its time had already passed.

Soviet military theory also naturally took into account probable enemies who could come forth against our Motherland. In the 1920s it was considered that the bourgeois states of Poland, Romania, and the Baltic countries (Finland, Estonia, Latvia, and Lithuania) would be in the first echelon of the Entente acting against the USSR. It was assumed that at the end of the 1920s all these countries would be able to advance 106 first-line[13] and 50-70 second-line infantry divisions with technical equipment that was not high-grade. Triandafillov also included among probable enemies France, which, according to his calculations, could advance 57-64 first-line and 82-90 second-line infantry divisions.[14]

The length of our western border (from the Arctic Ocean to the Black Sea) amounted to around 3000 kilometers; of this, the border with Finland was around 1500 kilometers, with Estonia and Latvia around 380 kilometers, and with Poland around 800 kilometers; the Romanian sector of the border was 320 kilometers.[15] Proceeding from this, it was assumed that in case of a war a single *front* formation [*ob"yedineniye*], which under those conditions was considered to be strategic, could be deployed on each of the sectors.

In the 1920s, strategic theory, and military affairs on the whole, developed under the enormous influence of World War I and the Civil War. A strenuous process of trying to understand the experience of these wars took place; lessons and conclusions were extracted. During the Civil War great attention was given to the use of the experience of World War I. Thus, in the Program of the Communist Party accepted at the VIII Congress, it was indicated that

> the widest use and application of the operational-technical experience of the last world war is necessary. In connection with this, it is necessary to attract military specialists who have gone

through the school of the old army for the matter of organizing the army and its operational leadership.[16]

The experience and knowledge of many military specialists and their active participation in military development played a significant role in the victories of the Red Army during the Civil War, in the training of young red commanders, in the generalization of the experience of past wars, and in the development of the military theory of the 1920s.

Of course, the old military specialists who were producing works on military theory and military history were far from Marxism and were prisoners of the old metaphysical and idealistic concepts and views which reflected the level of science in the 19th century. Therefore, for the successful development of Soviet military science, overcoming obsolete views and affirming Marxist-Leninist methodology, acquired exceptionally important significance. The military-scientific activity of Frunze, who brilliantly combined the qualities of statesman, military leader, and preeminent military theorist, played an important role in this matter. His works were distinguished by their high scientific level and had a great influence on the development of Soviet military science.

In studying the experience of World War I and the Civil War, Soviet researchers distinctly presented the features of armed combat in these wars: in World War I—a continuous, positional front, high density of troops and combat equipment, limited scope for the majority of operations, low rates of penetration; in the Civil War—the presence of a front "full of holes," low density of troops and combat equipment, decisive nature of operations, their great spatial scope, and high mobility. It is completely obvious that military theorists investigating problems of future war could not fail to consider the experience of wars which had recently come to an end.

In analyzing historical experience and tendencies in the development of military affairs and politics of imperialist states, Frunze viewed a future war of the Soviet State against capitalist countries as a class struggle.[17] He associated the greatest dynamism, decisiveness, and mobility with the most characteristic features of the activity of the Red Army in such a war. It is curious to note that issues of strategy in class wars also attracted the attention of A. M. Zayonchkovsky, a representative of the old Russian school. In lectures given at the Military Academy of the *RKKA* in 1922 and 1923, he spoke of the fact that it was impossible to develop a theory of strategy in future class wars based on the limited experience of the Civil War, that from this experience only preliminary appraisals could be drawn. Zayonchkovsky wrote, "Defensive strategy, which is not decisive, does not correspond to the idea of class wars." In his opinion, the offensive would be deployed on wide fronts. Strategic cavalry, an air fleet, and armored forces would actively operate on the flanks and in the rear of the enemy. However, he recommended in class wars as well not to forget "cold calculation and complete consideration of the unchanging foundations of military affairs."[18] In analyzing historical experience, Zayonchkovsky came to the conclusion that the conditions of armed combat in the 20th century had changed fundamentally. At the beginning of the 19th century, campaigns, if not wars, were won by one-two general engagements. In the Franco-Prussian War, three operations (Sedan, Metz, and Paris) brought the Germans a victorious conclusion to the war. Another situation was observed in 20th century wars. The Mukden victory did not open the road to peace for the Japanese, and two months later an even more powerful Russian army stood before them. In World War I, "defeat and victory alternated with each other, prisoners were numbered in the hundreds of thousands, but armies suffering defeat were reborn as if from the ashes."[19] Former Commander-in-Chief of the Red Army S. S. Kamenev also noted this very feature of 20th century wars. In his work *Ocherednyye voyennyye zadachi* [The next military tasks], he wrote

> A characteristic feature of wars with massive armies is the enormous routs of large military formations [*soyedineniye*] (corps, armies, *fronts*); these routs, despite their sometimes even catastrophic dimensions, nevertheless do not bring with them either decisive defeat or decisive victory for the corresponding sides. The struggle continues after such routs with the same obstinacy and intensity.

For decisive victory, he continued, it was not enough to produce a rout on one particular sector of a colossal front. This rout in no way would signal a catastrophe for the enemy.

> The routed sector will be easily reestablished by a new army and new materiel, after which the game will begin anew. In a war of modern armies, the sum of uninterrupted and systematic victories on the entire front of the struggle, successively added one to the other and connected to each other with respect to time, is necessary for a decisive rout of the enemy. Only with the help of such a chain of victories can the will of the enemy be considered shattered, where he is not able to use personnel and materiel available in his deployment to reestablish the routed sector.[20]

Thus, our military-scientific thought correctly considered that even a serious victory on one particular sector of the front could not lead to the destruction of the enemy. A number of uninterrupted and systematic victories are necessary to achieve this goal. This indicated a completely new phenomenon in military theory, elicited by the fact that armies of millions of men relying on the entire economic might of the warring states entered into the struggle. Following behind first echelons, second and then even subsequent echelons were introduced into combat. Industry and transport uninterruptedly and very intensively worked for the needs of the war. Victory demanded a prolonged and stubborn effort. Frunze wrote that modern armies possess a colossal survivability.

> Even the complete defeat of enemy armies achieved at a specific time still does not guarantee ultimate victory. . . . With time and space supporting a new mobilization of human and materiel resources necessary to reestablish the combat capability of an army, the latter can easily recreate a front and conduct combat further with hope for success.[21]

If the armies of strong enemies had such an enormous survivability in past wars, then there was no basis for supposing that the situation could be radically changed in the near future. The basic might of warring armies at the front was the rear area of the country, with its enormous human and materiel resources. At that time there were no combat assets for any kind of effective action against the rear. The enemy's might had to be shattered on the battlefields.

Inasmuch as our theory acknowledged that a strong enemy had enormous survivability and that a number of "uninterrupted and systematic victories" were necessary for his complete destruction, naturally there arose the question: which large strategic stages lie on the path to final victory over the enemy? Researchers acknowledged that campaigns were such strategic stages of war. However, there was no clear definition of a military campaign as a strategic category. Thus, Tukhachevsky wrote in his work *Voprosy sovremennoy strategii* [Problems of modern strategy], "Campaigns have lost the characteristic aspect which they formerly had. They can characterize either the entire period of the war or part of it, or coincide with a number of successive operations."[22] It cannot be said that this formulation was distinguished by particular clarity, but from this it is still evident that Tukhachevsky acknowledged both periods of a war and military campaigns which could "coincide with a number of successive operations." Svechin also adhered to roughly the same opinion. He considered that, "several operations united by time and place form a campaign [*kampaniya*]; the totality of campaigns in the course of an entire year is called a crusade [*pokhod*]."[23] Of course, the concept of a "crusade" for 20th century wars was an anachronism. N. Movchin, the author of the interesting book *Posledovatel'nyye operatsii po opytu Marny i Visly* [Successive operations according to the experience of the Marne and Vistula], expressed an original view of the essence of the campaign. He wrote that a campaign was "a collective concept, which encompasses the entire totality of activities on a specific TVD [*teatr voyennykh deystviy*/theater of military actions] in the course of a large interval of time."[24] He considered the fundamental portion of a campaign to be the totality of successive operations which developed on the direction of the main strike. As is evident from Svechin's and Movchin's definitions, a campaign was examined by us as the totality of military actions united by place and time. Such an interpretation of a campaign was a step backwards, even in comparison with the definition of a campaign given in Sytin's encyclopedia. In this it was noted that a campaign is "the totality of military actions which are directly connected to one another."[25] Indication of a direct connection of events assumed the presence of some general campaign plan.[26] But it was not only a matter of terminology. A great shortcoming of our military theory of the 1920s was the fact that it poorly investigated the problem of planning and organizing armed combat in campaigns. The ideas stated in Svechin's work *Strategy* bore a very general character.

In investigating the possible nature of future war, considerable attention in military theory was focused on issues of the strategy of "annihilation" [*strategiya sokrasheniya*] and the strategy of "attrition" [*strategiya*

izmora]. Frunze, Zayonchkovsky,[27] Svechin, Shaposhnikov, Tukhachevsky, and others touched upon these issues in their works.

The posing of the question of a strategy of "annihilation" and a strategy of "attrition" proceeded directly from the experience of World War I. At the beginning, Germany and Russia, in part, attempted to bring the war to an end before the autumn snowfall by means of annihilating blows. This strategy was bankrupt. For various reasons the war took on a prolonged, exhausting character. Our military thought focused attention on this very instructive fact.

In analyzing the economic and military capabilities of probable enemies, our theory considered that a future war could assume a prolonged and stubborn character. In the middle of the 1920s Frunze wrote

> War will take on the character of a prolonged and fierce competition subjecting all the economic and political foundations of the warring sides to a test. Expressed in the language of strategy, this means a shift from a strategy of lightning, decisive blows to a strategy of attrition.

However, Frunze further stressed that "from this in no way does the necessity arise for rejecting absolutely the strategy of lightning blows."[28].

Svechin devoted much attention to the strategies of "annihilation" and "attrition"; he considered that the term "attrition" poorly expressed the variety of all nuances of strategic methods found beyond the limits of a strategy of "annihilation." Despite such reservations, Svechin preferred, following Delbrueck, to use the term "attrition."

We will attempt to analyze the essence of Svechin's views on this issue.

1. The strategy of annihilation, in his opinion, was characteristic for wars at the beginning of the 19th century, when a campaign, if not the war, was won as a result of one or several engagements. In the 20th century the situation had radically changed. In a struggle of strong enemies, the armies which set forth into war were only the first echelon. Svechin wrote, "The beginning of the war in our time is not the culmination point of strategic tension. Second and third echelons of mobilized and supplied personnel represent military and economic mobilization."[29] Such a situation exists when it is impossible to win a war by means of a single effort.

2. If there are objective conditions for lightning wars, then the strategy of "annihilation" is a more preferable form of struggle than the strategy of "attrition." The latter is used when the war cannot be ended by a single method.[30] A struggle of attrition is typical for those states which are economically stronger than their enemies, have a stable rear, and are not torn apart by class and national conflicts.[31] A strategy of "annihilation" will be the most efficient form of struggle against that state "whose territory can be crossed on foot from end to end in a week."[32] This form can also be used in a war against a large state which is "in a state of political decay."[33] A war of annihilation will be conducted predominantly using materiel resources accumulated in peacetime. "A large state can base the struggle of attrition exclusively on the work of its industry in the course of the war itself."[34]

3. The political leadership, in advancing the aims of the war, should indicate how to conduct it: will it be in the form of "annihilation" or in the form of "attrition." Here, Svechin emphasized that

> in the political mission which establishes the political aim, a compromise will be suggested—either brief annihilation or prolonged attrition; preparation for war receives the same compromise solution, including an attempt to prepare part of the forces for swift operations and the tendency to provide for the possibility of a prolonged struggle.[35]

4. In his opinion, the struggle of attrition can be conducted "for the achievement of the most energetic, ultimate aims, until the complete physical annihilation of the enemy." On the strength of this circumstance he did not agree with the term "war with a limited aim."[36] The strategy of "attrition" in no way rejects the annihilation of the enemy, which is the aim of the operation. "But," he wrote, "it sees in this only part of the missions of an armed front, and not the entire mission."[37] Within the framework of the strategy of "attrition," all operations have a limited aim; in his opinion, it is as though the main theater loses its dominant significance, and the role of the struggle for geographic points which embody the economic interests of the warring states increases.[38]

Only some of Svechin's views on the strategy of "annihilation" and "attrition" have been summarized here. In them, issues relating to the nature of armed conflict in which armies of millions of men take part had been advanced. In Svechin's opinion, the primary aim of the struggle of attrition is to deprive the enemy of his economic capabilities as a basis for the further conduct of the war. Stressing attention on the strategy of "attrition," he considered that a small state could be defeated by a shattering blow. As for war against large states which have large materiel and human resources, it would inevitably take the form of a struggle of attrition, of exhaustion. In such a war, the main role in supplying the front with arms, combat equipment, and ammunition will be played by the intensive work of industry in the course of the war. Peacetime reserves will not be enough. They will be sufficient only for a rapid, lightning war. The very interesting idea which had been stated about the combination of "brief annihilation and prolonged attrition" unfortunately was not developed by Svechin.

Many of his tenets were poorly substantiated and one-sided, especially in polemical statements; therefore, they contained errors of a methodological nature which his opponents could not fail to notice. One of Svechin's critics on the issue of the strategy of "annihilation" and "attrition" was Tukhachevsky. In the preface to Delbrueck's book *The History of Military Art Within the Framework of Political History*, he criticized the author of *Strategy* for the fact that he rejected "the influence of the political aim on the form of war,"[39] ignored the class nature of states, and did not "see the difference between the politics of the working class and the politics of the bourgeoisie."[40] Having stated a number of correct critical observations, Tukhachevsky then pointed out that he did not wish to belittle the service of the author of *Strategy*.[41] Together with this, criticism of a number of theoretical positions of this work were far from always being objective and correct. For example, Svechin's statement that even the strategy of "attrition" in war could achieve "the complete physical annihilation of the enemy" was called "an absurdity." Being a fervent advocate of the strategy of "annihilation," Tukhachevsky cleanly rejected the strategy of "attrition." Such an attitude toward this was explained to a significant degree by the fact that Tukhachevsky acknowledged the possibility of exporting revolution. In one of his early articles, called *Revolyutsiya izvne* [Revolution from without] he wrote, "The advance of a revolutionary army of the working class into the borders of a neighboring bourgeois state can depose the power of the bourgeoisie there and transfer dictatorship into the hands of the proletariat."[42] This mistaken view of Tukhachevsky was also reflected in other works of his.[43]

The rejection of the strategy of "attrition" willingly or unwillingly reflected the view that in case of war against us the rear of capitalist countries will be unstable, that with the first strong blows of the Red Army, an aggravation of class conflicts will occur in such countries, and the working class will rise up and a civil war will begin. And once the matter takes such shape, what, it may be asked, is the strategy of "attrition" that we are talking about? One cannot fail to agree with A. V. Golubev that at that time, namely for these considerations, it seemed that the strategy of "attrition" was, in principle, inapplicable to the Soviet state.[44] It is true that not everyone adhered to such an extreme point of view. B. M. Shaposhnikov, for example, considered that

> a future war will take on the character of a struggle of attrition, but, depending on the size of the enemy's country, on his domestic condition, and on the class struggle developing there, the possibility of a strategy of annihilation is not excluded either.[45]

Unfortunately, the opinion which envisioned a combination of the strategy of "annihilation" and the strategy of "attrition" was not developed in our literature of the 1920s and 1930s. In the final analysis, the concrete practice of World War II resolved this issue. In rapidly-moving wars, the complete rout of the enemy was achieved by one-two shattering blows; in prolonged wars, the strategy of "attrition" put forth its laws, with all the consequences that proceeded from there.[46] We fully share the idea of Marshal of the Soviet Union M. V. Zakharov, which amounts to the fact that it is senseless to oppose the strategy of "annihilation" and the strategy of "attrition." Single, Napoleonic annihilating blows have already long ago receded into the field of history. Modern wars do not know a single method for conducting war, and "annihilation" and "attrition" as strategic forms can also supplement one another and change in the course of a war.[47]

From the course of the discussion on the strategy of "annihilation" and "attrition," the conclusion that it is extremely dangerous in resolving theoretical issues to ignore the conclusions of one's opponents and to stand on an extreme point of view is important.

World War I and the Civil War introduced significant changes into the forms and methods of conducting armed combat. In these wars the scale of military activities grew atypically, which led to a significant widening of the functions of strategy.

Our analytical thought on the whole correctly took into account the strategic experience of these wars. But there were also shortcomings. One of them must be kept in mind. Military theory in the 19th century identified the strategic offensive with the strategic offensive operation.[48] The practical experience of World War I and the Civil War showed that the strategic offensive cannot be reduced to one, however large, offensive operation. For example, in 1914 Russian troops simultaneously conducted two strategic offensive operations (one in East Prussia, the other in Galicia); in 1920, the Red Army simultaneously conducted two strategic offensive operations (on the Warsaw and Lvov Axes). It is true that the experience of conducting a strategic offensive simultaneously within two TVDs for various reasons did not have positive results. But at the same time, from this experience there also arose the conclusion that under specific conditions (the presence of sufficient forces and means, a high level of art, and others) a strategic offensive was possible even on several theaters. Nevertheless, our military theory, following the traditions of the 19th century, did not digress from the framework of the strategic offensive operation implemented in a TVD. As before, it identified the strategic offensive with the strategic operation. In this connection it is appropriate to note that in some scientific works which were published in the 1920s, the possibility of simultaneously conducting offensive operations in several theaters was envisioned.[49] Triandafillov stated a very interesting idea on this issue. He wrote that in the development of operations on a wide front and in directing a strike against intersecting operational directions, "it will be useful to have two fronts," and the operational leadership of the operations should be "left directly to the commander-in-chief on the main TVD."[50]

It is completely natural that offensive operations of several fronts should encompass several theaters as well, i.e., the greater, or in any case a significant part of a strategic front. The conduct of such operations presents high demands for their leadership on the part of the high command. However, individual thoughts about the scales and nature of the strategic offensive were not developed in theoretical works.[51] Traditions of the 19th century were alive. One of the reasons for such a situation was the fact that the students of G. Leer, who examined strategy as the study of operations, were the authors of the first works on strategy.[52] In these works tribute was given (by some authors to a greater degree, by others to a lesser degree) to Leer's basic concepts. Svechin made a serious attempt to surmount Leer's scheme of the strategic operation. More than once he emphasized that in our time operation "with a capital O" was inapplicable, that the scale of the struggle had overgrown the framework of even the largest operations. The criticism of obsolete views which attempted to enclose armed combat within the framework of a single strategic operation was justified, but, unfortunately, was not given any attention. The strategic offensive, as before, was identified with the strategic operation, which was conceived as conducted by the forces of a single *front*. This view not only was dominant in the 1920s, but also, in general, was maintained right up until the beginning of World War II. It is true that on the eve of the Great Patriotic War individual ideas about the possibility of conducting a strategic operation with forces of more than one *front* were stated.

What then was understood as the strategic offensive operation from the point of view of aims and methods of conducting it?

In the 1920s, it was considered that the rout of the entire strategic front of an enemy extending thousands of kilometers was a task beyond one's means. Thus, Zayonchkovsky wrote, "To destroy personnel on the entire expanse from, for example, the Baltic to the Black Sea is an unthinkable matter."[53] Therefore, he suggested that the strategic offensive would be deployed on one of the theaters and take the shape of a large strategic operation.[54]

The aim of a strategic operation is understood as that final result for the sake of which the operation is undertaken.[55] Proceeding from this, it was considered that the aims of such operations could be varied. In studying historical experience, military researchers completely naturally came to the conclusion that the most typical aim of a strategic offensive operation deploying in a TVD is the decisive rout of the enemy. Zayonchkovsky wrote

> Napoleon's principle of defeating personnel remains inviolable today. . . . Territory and lines are ultimately only intermediate stages and a kind of background for leading to the complete lack of combat capability of the enemy's armed forces, which, as before, is the only true success in war.[56]

Tukhachevsky formulated this idea even more categorically. He wrote, "The aim of war is economic and political acquisitions for one side and the struggle against such acquisitions for the other side." But in order to achieve these aims it is necessary to destroy the enemy's armed forces. "The more complete such destruction is, the greater the degree of guarantee for the achievement of the aims of the war."[57] In Tukhachevsky's work *Voprosy vysshego komandovaniya* [Problems of higher command], there is a small section on the annihilating operation [*unichtozhayushchaya operatsiya*]. In it he wrote

> Operations are conducted to annihilate the enemy's vital armed forces; this is necessary to achieve the war aims. The most advantageous annihilation is achieved by taking the enemy prisoner, since, in addition to weakening the enemy's army, prisoners economically reinforce the victor's rear. If taking prisoners is difficult or unsuccessful, the operation should achieve annihilation by physically destroying the enemy. . . . An attempt to annihilate enemy personnel forces the chief conducting the operation to barely consider or completely disregard the acquisition or maintenance of territory.[58]

In arguments Tukhachevsky correctly emphasized the idea that a rout (annihilation) of the enemy is the truest path to decisive victory. But it is, of course, impossible to agree with the statement that in conducting an operation "the acquisition or maintenance of territory" cannot be considered. At least two objections can be advanced against this. First, the struggle against the enemy is not conducted in a vacuum, but on specific territory. The rout of large strategic groupings which are operating on large expanses has serious influence on the course of the war. Therefore, the issue of capturing territory is also resolved automatically with the successful resolution of this mission. Second, territory is a concrete source of human and materiel resources. Important economic and political centers are located on it. Therefore, for the attacker it makes no difference in whose disposition these resources and centers are located. It also makes no difference for politics and strategy on whose territory the war is conducted. In theaters where battles and operations are taking place, the population experiences enormous hardships. The maximum easing of the situation for the population in the zone near the front is one of the important tasks of the military-political leadership. Thus, the statement that in conducting operations acquisition or losses of territory should not be taken into account cannot be considered correct. Even during the Napoleonic wars, when the economic significance of territory was different, much attention was given to capturing capitals and other important centers where considerable materiel resources were concentrated.

In later works Tukhachevsky changed his view on the significance of territory. In the work *Voprosy sovremennoy strategii* [Problems of modern strategy], published in 1926, he wrote that Germany held out so long during World War I because she "seized a whole series of production regions: Romania, Poland, the Baltic area, etc. In addition, she seized a whole series of areas with fuel, iron, etc. All this increased her capability to conduct war."[59]. Later he pointed out that capturing territory has an exceptionally important significance for the Red Army too, since this widens the "war base."[60]

Proceeding from war experience, some authors (Gutor, for example) considered that in the course of armed combat other aims can arise as well for strategic offensive operations. Thus, in his opinion the ultimate aim of the operation of the Western Front in 1920 was to capture a political and economic center (Warsaw); the ultimate aim of the Northwestern Front at the beginning of the 1914 campaign was to capture an important portion of enemy territory (East Prussia); in the Russo-Turkish Wars it was to capture a strategic line, an inaccessible obstacle, after which favorable conditions were created for the development of the offense (the Danube and the Balkans). The posing of such aims in strategic operations could take place in those wars in which it was not possible to put an end to the enemy with one blow, where it was consequently necessary to proceed step by step to victory over the enemy.

Soviet military-scientific thought viewed a future war of the Soviet State against capitalist countries as a struggle against coalitions of bourgeois states. Under these conditions it was suggested that the most important mission would be cutting off any of the countries from the hostile coalitions. Tukhachevsky said that in conducting a war against a coalition, we must build "a plan for the liquidation of the entire coalition not at once, but piecemeal, successively and systematically."[61] With such a nature of armed combat, taking one or another of the participants of the hostile coalition out of the war could require the conduct of a large offensive operation.

Thus, our military theory in the 1920s proceeded from the fact that, depending on the aims of the war and conditions of the situation, the aims of strategic offensive operations could be varied. The decisive rout of the

enemy and capture of a specific area was considered one of the most typical aims of operations. Such a view of the aims of an operation was proven completely correct during the last war.

Our analytical thought focused much attention in these years on the issue of the methods of conducting armed combat. It was completely evident that operations could be implemented between the Baltic and Black Seas (an expanse of 1500 kilometers) on four theaters: Northwestern, Western, Southwestern, and Southern. It was considered that one *front* formation [*ob"yedineniye*] would operate on each of these theaters (as in 1916-1917). The simultaneous deployment of a strategic offensive against an enemy coalition on the entire expanse from the Baltics to the Black Sea was considered an impossible task as a consequence of insufficient forces and means. Tukhachevsky wrote

> Therefore, in conducting a war against a coalition, it is necessary . . . to note the significance of one, or another, or a third member of this coalition and correctly structure a plan for their successive elimination until a favorable correlation of forces, overwhelmingly in our favor, has been created—all this is a fundamental difficulty, and together with this the fundamental art of modern strategy.[62]

With a great expanse of strategic fronts (two-three and more thousand kilometers), armed combat of several states entering into a hostile coalition can be conducted simultaneously: on the right flank—one state, in the center—a second, on the left flank—a third state. Successively taking them out of the war, as was suggested by Tukhachevsky, was connected with conducting a series of successive operations along the front. This method of conducting offensive operations was acknowledged, but was not analyzed theoretically. And this was a substantial shortcoming of our theory.

In developing methods of conducting combat on TVDs, our military theory focused much attention on issues of organizing and conducting successive offensive operations into the depth. Many military researchers, including Tukhachevsky, Svechin, Triandafillov, Varfolomeyev, Movchin, and others, studied this problem.

Tukhachevsky considered that to fully rout the enemy it was necessary that one offensive operation develop into another without any loss of time whatsoever. The conduct of an offensive should provide the capability of completing the annihilation of enemy forces which have slipped out from under a strike. Therefore, a new annihilating operation should begin directly from the march, without the slightest loss of time. He considered all successive operations as parts of one large operation.[63] Svechin also supported this same point of view. Under conditions which had become complex, the destructive offensive, he wrote, is

> a series of successive operations which, however, are internally connected in such a way that they merge into one gigantic operation. The initial position for the following operation proceeds directly from the achieved aim of the operation which has been completed.[64]

And so, in the opinion of Svechin and Tukhachevsky, the strategic offensive was enclosed within the framework of one large, or in Svechin's terminology "gigantic" operation. What, then, was the scope suggested for this operation?

In the work *Novyye voprosy voyny* [New issues of war], Tukhachevsky wrote that to destroy the enemy it was necessary to deploy the offense over a significant expanse. "A wide front is necessary to subject a large, or in any case a significant part of enemy forces to defeat, and to be able to engage one's own even greater overwhelming forces into battle."[65] In his opinion the offense had to include hundreds of kilometers of front and to be implemented by forces of up to 100 divisions. The main strike was to be delivered by forces of up to 60 divisions on a front of up to 120 kilometers.

Interesting thoughts on this issue were stated by Triandafillov. He considered that with a large extension of the front line and stability of the defense, operations on narrow sectors could not be implemented. He wrote

> One shock army can decisively attack only on a sector of 25-30 kilometers. With respect to a 400-km front, this is literally a pin-prick. Such an operation can have only limited local aims. For decisive success on fronts of the above-mentioned lengths, an attack on a sector of no less than 150-200 kilometers is required, for which it is necessary to deploy forces numbering 50 divisions or more in the first echelon alone.[66]

And further: "Operations reckoned against the enemy and occupying a front of 350-400 kilometers require depths of no less than these 350-400 kilometers and an accelerated tempo of advance."[67] Triandafillov put the achievement of such a depth in dependence on the operation of railroad transport. He considered that its

development would make it possible in the near future to resolve the problem of deep and annihilating strikes by means of implementing a series of successive operations conducted within the framework of one larger operation.

Thus, both Tukhachevsky and Triandafillov, speaking about a 400-km offensive front, had in mind the conduct of one large front operation. Such a view of the scope of an offensive front operation remained, in essence, right up until the beginning of the Great Patriotic War.[68]

N. Movchin devoted a special book to the problems of conducting successive operations.[69] In it the author investigated the advance of the German troops to the Marne in 1914 and the advance of the troops of our Western Front to the Vistula in 1920, and on the basis of the experience of these greatest of military events he made very interesting judgments about the possible nature of successive operations under modern conditions. He considered that successive operations along the depth could be conducted in the following sequence: first operation—initial; second operation—pursuit operation; third operation—decisive.

He envisioned that in practice "various combinations of the primary types (two or three initial operations) which come to an end with pursuit, etc., are possible."[70] Movchin identified the pursuit operation as strategic pursuit. He considered that a *front* could conduct two-three successive operations; the depth of the first two was defined from 120-150 kilometers. He suggested that it was necessary either to stop at a convenient line or continue to the exhaustion of forces and means in a decisive operation (in some cases risk was possible, and even necessary) to conduct the third *front* operation.[71]

Such a conclusion proceeded to a significant degree from the experience of encounters lost by German troops on the Marne in 1914 and by our troops on the Vistula in 1920. These lessons had a strong influence on many conclusions made by Movchin. He considered that under modern conditions (the end of the 1920s) the achievement of a depth of 500-600 kilometers was definitely impossible "if it proceeds from an assumption about the stability of the enemy."[72] Here the author emphasized that "a number of successive operations are of themselves a rare occurrence, and much preliminary data are required to make their implementation possible."[73] He associated these data with superiority over the enemy in forces and means (within the main TVD), good troop training and their high moral condition, the presence of personnel reserves, a sufficient quantity of materiel reserves, etc.

Thus, if one speaks about the methods of armed combat, our military theory had done much to work out issues of organization and conduct of offensive operations into the depth. As for investigating the issue of the conduct of successive operations along a front, this was only posed, and was not researched theoretically. The issues of conducting a system of successive offensive operations unfolding simultaneously both along a front and into the depth remained in the same condition.

Summing up what has been said, it should be noted that in the 1920s our military-scientific thought achieved considerable successes in working out many important issues of strategic theory. One of the serious achievements is the fact that in principle the possible nature of armed combat in a future war was correctly determined. Considerable success was also achieved in developing the theory of strategic offensive operations. Opinions on these issues were basically vital in subsequent years as well. It should also be considered that strategic theory in the 1920s developed under conditions of a narrow material-technical base, taking into account fully defined probable enemies. This, naturally, put its stamp on the possible framework and methods of armed combat in a future war.

ENDNOTES

1. N. Pavlenko, "Nekotoryye voprosy razvitiya teorii strategii v 20-kh godakh," *Voyenno-istoricheskiy zhurnal* [Military-historical journal], 5 (May 1966), pp. 10—26.
2. V. I. Lenin, *Polnoye sobraniye sochineniy* [Complete collection of works], Volume 40, pp. 182—183.
3. M. V. Frunze, *Yedinaya voyennaya doktrina i Krasnaya Armiya* [Unified military doctrine and the Red Army]; *Front i tyl v voyne budushchego* [Front and rear in a future war]; *Osnovnyye voyennyye zadachi momenta* [The primary military tasks of the moment]; *Lenin i Krasnaya Armiya* [Lenin and the Red Army]; and others (see M. V. Frunze, *Izbrannyye proizvedeniya* [Selected works], Volumes I and II (Moscow: Voyenizdat, 1957).
4. M. N. Tukhachevsky, *Voyna kak problema vooruzhennoy bor'by* [War as an issue of armed struggle]; Preface to H. Delbrueck's book *Istoriya voyennogo iskusstva v ramkakh politicheskoy istorii* [The history of military art within the framework of political history], and others (see M. N. Tukhachevsky, *Izbrannyye proizvedeniya* [Selected works], Volumes 1, 2 (Moscow: Voyenizdat, 1964).
5. A. A. Svechin, *Strategiya* [Strategy], 1st edition (Moscow-Leningrad: Gosvoyenizdat, 1926); 2d edition (Moscow: Voyennyy Vestnik, 1927).

A. A. Svechin (1878-1938) was a major general in the old army. He took part in the Russo-Japanese War and World War I. From March 1918 he was military leader of the Smolensk region of the Western Screen, and later he was the chief of the All Russian Main Staff (*Vseroglavshtab*), chairman of the Military-History Commission, instructor at the Military Academy of the *RKKA* from 28 November 1918, and then instructor at the General Staff Academy. He was the author of many works on issues of military theory and military history.

6. A. A. Neznamov, *Sovremennaya voyna* [Modern war], parts I and II (Higher Military Editorial Council, 1922).

   A. A. Neznamov (1872-1928) was a major general in the old army; he graduated from the General Staff Academy and was a professor at the Academy and served at important posts in staffs. In 1918 he entered the Red Army and taught strategy and tactics at military academies. He was the author of a number of scientific works on strategic issues.

7. A. M. Zayonchkovsky, *Lektsii po strategii, chitannyye na voyenno-akademicheskikh kursakh vysshego komsostava v Voyennoy akademii RKKA v 1922-1923 gg* [Lectures on strategy given in military-academic courses for higher command personnel at the Military Academy of the *RKKA* in 1922-1923], parts I, II, 1923.

   A. M. Zayonchkovsky (1862-1926) was an infantry general; he graduated from the General Staff Academy, took part in the Russo-Japanese War and World War I. In 1918 he entered the Red Army. After the Civil War he became a professor at the Military Academy of the *RKKA*. He left a rich literary legacy on the history of the Crimean War and World War I.

8. V. K. Triandafillov, *Kharakter operatsiy sovremennykh armiy* [The nature of operations of modern armies], 2d edition (Moscow: GVIZ, 1932).

9. S. S. Kamenev, *Operatsiya (Voprosy strategii i operativnogo iskusstva v sovetskikh voyennykh trudakh 1917-1940)* [The operation (Questions of strategy and operational art in Soviet military works 1917-1940)] (Moscow: Voyenizdat, 1965); B. M. Shaposhnikov, *Mozg armii* [The brain of the army], Books I, II, III (Moscow: Voyennyy Vestnik, 1927); N. N. Movchin, *Posledovatel'nyye operatsii po opytu Marna i Visly* [Successive operations according to the experience of the Marne and the Vistula] (Moscow-Leningrad: Gosizdat, 1928).

   N. N. Movchin (1896-1938) took part in the Civil War, served on the *RKKA* Staff, and graduated from the Military Academy of the *RKKA*. In the 1920s he published works on the investigation of war experience.

10. The attitude toward strategy is characterized by the following. In 1935, the military-history department was organized at the Frunze Military Academy. According to the testimony of the department head, A. V. Golubev, a 32-hour course of lectures on strategic theory was envisioned in its academic program. The deputy chief of the academy, Ye. A. Shchadenko, in examining the program, announced to Golubev, "What kind of a strategy course in this? Comrade Stalin personally studies strategy, and it is not a matter for us." It is true that the chief of the Frunze Military Academy, B. M. Shaposhnikov, did not agree with his deputy's opinion. According to Golubev's testimony, Shaposhnikov told him, "The question of giving lectures on strategy is in agreement with the Political Directorate of the *RKKA*; there will be a lecture course on strategy in the department, and your task is to prepare it." Lectures were prepared, but they were not given. The department was in existence all of one year, and then it was included in the newly-created General Staff Academy, in the program of which was no cycle of lectures on strategy. Attempts were made to advocate a strategy course in the General Staff Academy. However, as former head of the department of operational art of this academy, G. S. Isserson, recalls, the slightest hint of a necessity to introduce into the academy in one form or another a strategy course as a foundation for operational art ran into objections from above. When this issue was raised at one of the meetings before the opening of the academy, Chief of the General Staff Marshal A. I. Yegorov, with some irritation, directly asked the president of the academy, "Well, what would you study about strategy? The war plan? Strategic deployment? Or the conduct of war? No one will allow you to do this, because this is a matter for the General Staff." (*Voyenno-istoricheskiy zhurnal* [Military-historical journal], 3 (March 1965), pp. 49—50). Of course, no one posing the question was encroaching upon the prerogatives of the General Staff in the area of practical development of the issues of planning and conducting a war. It was a matter of investigating issues of strategic theory.

11. A. I. Verkhovsky, *Ogon', manevr, i maskirovka* [Fire, maneuver, and *maskirovka*] (Moscow: Voyennyy Vestnik, 1928), p. 231.

12. In a speech dedicated to the 20th anniversary of the Red Army and Navy, K. Ye. Voroshilov in 1938 said, "The cavalry in all armies of the world is undergoing, or more correctly has undergone, a crisis, and in many armies has almost been reduced to nothing . . . We advocate another point of view . . . We are convinced that our excellent cavalry will continue to be spoken of as the powerful and triumphant Red Cavalry. As before, the Red Cavalry is a triumphant and annihilating armed force and can and will resolve great missions on all combat fronts" (K. Ye. Voroshilov, *XX let Raboche-Krest'yanskoy Krasnoy Armii i Voyenno-Morskogo Flota* [20 years of the Workers' and Peasants' Red Army and Navy] (Moscow: Gospolizdat, 1938), p. 14.

13. Poland—48, Romania—36, Estonia—5, Latvia—6, Finland—6, and Lithuania—5 (Triandafillov, p. 34).

14. Triandafillov, p. 38.

15. Ibid., p. 69.

16. *Vos'moy s"yezd RKP(b). Mart 1919g. Protokoly* [Eighth Congress of the *RKP(b)*. March 1919. Protocols] (Gospolitizdat, 1959), p. 345.

17. See Frunze, Selected Works, Volume II, p. 44.

18. Zayonchkovsky, p. 37.

19. Ibid., p. 44.

20. *Problems of Strategy and Operational Art in Soviet Military Works (1917-1940)*, p. 149—150.

21. Frunze, Volume II, p. 133.

22. Tukhachevsky, Volume I, p. 260.

23. Svechin, p. 296.

24. Movchin, p. 116.

25. *Voyennaya entsiklopediya* [Military encyclopedia], published by the Association of I. D. Sytin, Volume XII, 1913, p. 331.

26. In the middle of the 19th century a precise definition of a campaign was given in the article "The Campaign" by Engels. He wrote, "The campaign indicates a number of military operations which are closely connected to one another by a single strategic plan and directed toward the achievement of a single strategic aim" (K. Marx and F. Engels, Works, 2d edition, Vol. XIV, p. 242).

27. Zayonchkovsky in his lectures given at the Military Academy of the *RKKA* in 1922-1923 (part 2, p. 25) spoke "about a strategy of decisive operations and a strategy of exhaustion." The first, in his opinion, searched for a rapid solution by means of a decisive

advance and battle," the second "is expressed in isolating the enemy from the external world and depriving him of means of existence."

28. Frunze, Vol. II, p. 133.
29. Svechin, pp. 258—259.
30. Ibid, p. 263.
31. Ibid., p. 56.
32. Ibid., p. 259.
33. Ibid.
34. Ibid., p. 58.
35. Ibid., p. 59.
36. Ibid., p. 57.
37. Ibid., p. 262.
38. Ibid., p. 264.
39. Tukhachevsky, Vol. II, p. 137.
40. Ibid., p. 137—138.
41. An analysis of Svechin's works was conducted differently at the beginning of the 1930s. Here it was not so much evidence as unsubstantiated accusations which prevailed. Characteristic in this respect was the stenogram of the open meeting of the plenum of the section for studying war issues of the Leningrad Section of the Communist Academy of the USSR Central Institute of Communism dated 25 April 1931. Speaking at this meeting, Tukhachevsky directly called the theory of "attrition" a "defeatist theory" (*Protiv reaktsionnykh teoriy na voyenno-nauchnom fronte* [Against reactionary theories on the military-scientific front] (Moscow: Gosvoyenizdat, 1931), p. 10). He also very unjustly evaluated the author of *Strategy*. Svechin's theory was declared an integral link in the intervention being prepared against us. About the author himself, it was said that he "in fact is leading the Red Army to defeat," that he "objectively is an agent of the bourgeoisie" (Against reactionary theories, pp. 7, 8, 10).

    Of course after similar "discussions", theoretical questions posed by Svechin on the problems of "annihilation" and "exhaustion" ceased to be discussed. The strategy of "attrition" was buried in oblivion, and opposing, one-sided points of view remained beyond criticism.
42. "Revolyutsiya i voyna." *Sbornik tretiy* ["Revolution and war." Third collection] (Directorate of Military-Educational Institutions of the Western Front, Publications Department, 1920), p. 46. In publishing Tukhachevsky's article, the editorial board of this journal noted that the article expressed the subjective views of the author, and that "the RSFSR conducted and can conduct only defensive wars."
43. Tukhachevsky, Vol. I, pp. 168, 252, 258.
44. *Voyenno-istoricheskiy zhurnal* [Military-historical journal], 10 (October 1965), p. 37.
45. Shaposhnikov, Book 1, p. 245.
46. Fascist Germany achieved victory in the war against Poland as a result of a single operation. Victory in Yugoslavia was gained by one blow. The rout of the armed forces of the western powers was achieved in two successive operations. In the first operation, implemented in May 1940, German-fascist troops succeeded in splitting the allies' strategic front and arrived at the Channel; in the second operation, which unfolded in June from the Aisne River, French troops suffered complete defeat. In these wars, for a number of reasons favorable to the Germans, her troops succeeded in achieving victories by conducting one-two annihilating operations.

    The war of fascist Germany against the Soviet Union acquired a completely different, prolonged, and exhausting character. German-fascist troops had great successes in the 1941 and 1942 operations, but they were very far from victory.

    In the course of the last war a majority of offensive operations and campaigns conducted by the Soviet Army bore an exclusively decisive character. In order to bring the war to a victorious conclusion, it was necessary to disembowel the enemy, in the literal sense of the word, and exhaust his human and materiel resources by the skillful conduct of annihilating operations. The following figures convincingly attest to losses of German-fascist troops. By the beginning of the war the German-fascist troops had on the Soviet-German front 4.4 million men (3.3 million in the ground forces), 50,000 guns and mortars, 3400 tanks and 4000 aircraft (*Istoriya Velikoy Otechestvennoy voyny Sovetskogo Soyuza 1941-1945* [History of the Great Patriotic War of the Soviet Union 1941-1945], Volume I (Moscow: Voyenizdat, 1963), p. 384). During the war against the Soviet Union, German troops lost (dead, wounded, prisoners, and missing in action) around 10 million men, 167,000 guns and mortars, 48,000 tanks (*History of The Great Patriotic War*, Volume VI, p. 29) and 62,000 aircraft (*Porazheniye germanskogo imperializma vo vtoroy mirovoy voyne* [Defeat of German imperialism in World War II] (Moscow: Voyenizdat, 1960), p. 115). Consequently, Germany lost 2.3 times more men, 3.3 times more guns and mortars, 14 times more tanks and assault guns, and 15.5 times more aircraft than it had on the Soviet-German front at the beginning of the war.

    In the course of the war the strategies of "annihilation" and "attrition" were combined in practice. Strategic offensive operations and campaigns skillfully conducted by the Soviet command were, in truth, a clear expression of the strategy of "annihilation," which Tukhachevsky had so favored in the prewar years. Annihilating routs of enemy strategic groupings in each campaign undermined the military, economic, and political might of the enemy. The human, materiel, and spiritual strength of fascist Germany was gradually worn down. It was unswervingly approaching a catastrophe. If the offensive operations and campaigns of the Soviet Army had an annihilating nature, in the full sense of the word, the war of the Soviet Union against fascist Germany and her allies was a war of complete exhaustion of human and materiel resources. The close intertwining of the strategy of "annihilation" with the strategy of "attrition" of the warring sides is one of the characteristic markers of the last war.
47. *Problems of Strategy and Operational Art in Soviet Military works (1917-1940)*, p. 16.
48. See *Military-Historical Journal*, 10 (October 1964), pp. 104—116.
49. Svechin, p. 317.
50. Triandafillov, p. 171.
51. The issue of the possibility of a simultaneous deployment of a strategic offensive by forces of several fronts was raised at the meeting of the higher command in December 1940. Thus, in summing up the results of the work of the meeting, People's Commissar for Defense Marshal S. K. Timoshenko said in his concluding remarks on 31 December, "It is necessary to keep in mind the possibility of

simultaneously conducting two, if not three offensive operations of various fronts on a theater of war with the intention of strategically shaking the enemy's entire combat capability as extensively as possible."

52. A. A. Neznamov, *Osnovy sovremennoy strategii* [Foundations of modern strategy], General Staff Academy of the *RKKA* (Moscow: 1919); *Sovremennaya strategiya* [Modern strategy], part I, 1921, part II, 1922; A. M. Zayonchkovsky, *Lectures*; A. Ye. Gutor, *Lektsii po strategii chitannyye v Voyennoy akademii RKKA v 1922-1923 uch. godu* [Lectures on strategy given at the Military Academy of the *RKKA* in the 1922-1923 academic year] (Moscow: 1923).
53. Zayonchkovsky, *Lectures on Strategy*, part 2, p. 44.
54. Zayonchkovsky understood strategic operations as "successive rapid stages in the armed forces' execution of the overall war plan" (*Lectures on strategy*, p. 41). Gutor gave the following definition of a strategic operation: "We understand the strategic operation as some completed period of troop activities or movement in a TVD" (*Lectures*, p. 1).
55. Gutor, *Lectures*, p. 13. A. Ye. Gutor (1868-1938) was a lieutenant general in the old army; he commanded a corps and army in World War I. He was a member of the special session under the commander-in-chief during the Soviet-Polish War. He was a senior instructor at the Frunze Military Academy and the author of a number of works on military theory and history.
56. Zayonchkovsky, *Lectures*, p. 45.
57. Tukhachevsky, Vol. I, p. 107.
58. Ibid., p. 185.
59. Ibid., p. 256.
60. Ibid., p. 259.
61. Ibid., p. 256.
62. Ibid.
63. Ibid., p. 186.
64. Svechin, p. 256.
65. *Problems of Strategy and Operational Art in Soviet Military Works (1917-1940)*, p. 119.
66. Triandafillov, p. 115.
67. Ibid., p. 151.
68. In this connection it is appropriate to note that the basic ideas stated by Triandafillov converged with those observations stated at the meeting of the higher command staff in December 1940. From the talk by General of Army G. K. Zhukov and the concluding words of Marshal of the Soviet Union S. K. Timoshenko, it is evident that it was suggested to conduct a front offensive operation in a zone of 300-400 kilometers and at a depth of 200-300 kilometers and more. The main strike in the operation was to be implemented on a front of 60-100 kilometers. To conduct such an operation, it was suggested to have 60-75 rifle divisions, 4-5 mechanized corps, 2-3 cavalry corps, 15-30 aviation divisions, and other reinforcement assets as part of the front.
69. N. Movchin, *Posledovatel'nyye operatsii po opytu Marny i Visly* [Successive operations according to the experience of the Marne and the Vistula] (Moscow-Leningrad: Gosizdat, Military Literature Department, 1928).
70. Ibid., p. 118.
71. Ibid., p. 11.
72. Ibid., p. 114.
73. Ibid., p. 121.

ON THE THEORY OF DEEP OPERATION[1]

Marshal of the Soviet Union M. Zakharov

In the period of socialist development which unfolded in the country, the Communist Party and the Soviet State did not forget for a minute the defense of the country or the strengthening of its military might. Great attention was given to the further development of military theory, the cornerstone of which was Lenin's tenets, beginning with his definition of the nature of future war.

The practical activity and scientific works of M. V. Frunze—*Yedinaya voyennaya doktrina i Krasnaya Armiya* [Unified military doctrine and the Red Army] and *Front i tyl v voyne budushchego* [The front and rear in a future war]—had important significance for the development of Soviet analytical thought. In them Lenin's tenets on the nature of future war were developed, and the most important problems of the development of the Armed Forces and preparation of the country for war were underscored.

Future war, Frunze said, will be a class war; it will inevitably give rise to exacerbation of the class struggle within a hostile capitalist state which has begun aggression against the Soviet republic. Without rejecting the possibility of lightning strikes, he considered that future clashes could lead to a protracted war.[2]

Frunze assumed high mobility of troops in conducting operations without excluding the possibility of using positional forms of combat on individual sectors. He viewed high mobility as one of the ways of overcoming the military-technical backwardness of our forces.

Frunze considered that, all other things being equal, the offense is more advantageous than the defense; a successful transition to the offense is the mission of the defense; the Red Army had to be indoctrinated in an offensive spirit.

Frunze's views, supported by the Central Committee of the Party and the military community, had a great influence on the development of Soviet military-theoretical thought and were reflected in official documents, in particular in the *1925 Field Regulation*, in the instructions, *Higher Command*, professed by Frunze and issued in 1924, and also in the combat regulations for infantry and other combat arms which came to light in the same year. These documents had enormous significance for establishing uniformity of opinions on many operational-tactical issues.

The greatest achievement of military-theoretical thought was the development of the theory of deep operation, which was the foremost theory of that time.

In the given article, the history of the birth and development of this theory is examined.

Based on the development of military equipment abroad in the 1920s and on the prospects for outfitting the Red Army, Soviet military-technical and analytical thought correctly evaluated the influence of new military equipment on the structure of the army and military art, and considered it expedient to have a massive army. Proceeding from this, it searched for a way of developing the organization of the Soviet Armed Forces, their technical outfitting, and combat preparation, and attempted to determine scientifically the nature of future war, the operation, and the battle on the basis of Marxist-Leninist teaching and the experience of past wars.

The prewar five-year plan played a large role in the successful solution of these vital problems; this made it possible to create a stable materiel-technical base for the reorganization of the army. The technical rearmament of the Soviet Armed Forces fundamentally changed the old concept about battle and operation and had a great influence on the development of Soviet military theory, which later arrived at the development of the foundations of deep operation and tactics of deep battle.

As a result of economic transformations projected by the five-year plan and uninterrupted industrial growth, the technical outfitting of the Red Army improved as well. Thus, if in 1930-1931 the aviation industry produced a yearly average of 860 aircraft and the tank industry produced 740 tanks, then in 1932-1933 they produced around 2600 aircraft and 3770 tanks respectively. During this period the output of small arms and artillery grew from 1911 guns and 174,000 rifles to 3778 guns and 256,000 rifles. These rather tangible indicators brought our army to the level of the foremost modern armies. It changed its appearance qualitatively and quantitatively. New combat arms were created and their share increased. Massive

preparation of technical cadres was taking place. The Communist Party slogan, "Technology in the period of reconstruction resolves everything" found a living embodiment in the army too.

By the end of the second five-year plan, the Red Army already had at its disposal a stable materiel-technical base. Our industry was able to produce all modern technical means of combat, not lagging behind armies of capitalist states in quality. The quantity of arms and combat equipment entering into the army and navy, especially small arms, artillery, and aircraft, grew sharply. Thus, 5469 aircraft, 12,637 guns, around 75,000 machine guns, and as many as 1,200,000 rifles came from industry in 1938. The army obtained new small arms-artillery armaments, new tanks, and aircraft; the mechanization and motorization of ground forces proceeded; and the number of tank and mechanized formations [*soyedineniye*] and units making up the primary strike force increased. Air assault troops were born and successfully developed.

Army and navy personnel changed. Following the Communist Party slogan, "Cadres resolve everything," the country's academic institutions grabbed millions of highly-qualified specialists. Technically prepared young men not only from cities but also from small villages were called up into the army. Tractor and combine operators and drivers became tankmen and drivers of other combat vehicles. Replenishments prepared by *Osoaviakhim* [*Obshchestvo sodeystviya oborone i aviatsionno-khimicheskomu stroitel'stvu SSSR*/Society for Assistance to Defense and Aviation Development of the USSR] arrived for aviation. There were no illiterate soldiers in the Red Army.

All this had a positive influence on the combat and political preparation of troops and created favorable conditions for extensive military-theoretical research, taking into account the achievements of the national economy and science, new technical capabilities of the army, and the level of personnel preparation.

Soviet military thought conceived future war as an armed conflict of enormous armies in which the opposing sides pursued decisive aims—the complete destruction of the enemy. War acquired a colossal framework and extreme tension. It could not be a lightning one, i.e., brought to an end by a single, albeit gigantic strategic operation. It was considered that armed combat would consist of a number of blows forming a system of successive operations of strategic significance. When deployed, massive armies can create a continuous defensive front, relying on natural lines, obstacles, fortified regions, or field defensive structures. Under these conditions there arose the necessity of organizing a breakthrough of the defense with the help of modern means of combat in order to rapidly overcome the defense.

As is known, during World War I a tactical penetration usually did not develop into an operational one. Operations remained incomplete and, consequently, did not achieve the projected aims. The theory of successive offensive operations of the 1920s envisioned the delivery of two strikes or one main strike by *front* forces. Several more auxiliary strikes were planned so that the enemy could not throw his reserves into the penetration sectors of secondary directions. Here, the overall front of attack was not to exceed half the width of the entire zone of the *front* offensive. It was considered that uninterrupted combat operations could continue for a month and achieve a depth of 150-250 kilometers, after which the troops ceased the advance for 2-4 weeks in order to bring forward the rear areas and replenishments. Such a sequence of advance allowed the enemy to withdraw troops into the depth and organize a defense on new lines. This theory, based on the experience of World War I, was obsolete and did not respond to the new demands of future war.

Therefore, it was necessary to develop a principally new theory of offensive operation and find forms and methods of armed combat which would make it possible to overcome the strong fire of a continuous front and annihilate enemy operational groupings to achieve strategic success.

Soviet military thought considered that it was necessary to inflict strikes of enormous penetrating force along the entire depth of the operational structure of the enemy defense to resolve these missions. Such strikes could be implemented only by deeply echeloned masses of interacting infantry troops, tanks, and artillery, with aviation support. This method of combat operations received the name deep operation.

The rudiments of this theory can be seen already in the research being conducted in the second half of the 1920s by M. N. Tukhachevsky, N. Ye. Varfolomeyev, A. K. Kolenkovsky, I. P. Uborevich, V. K. Triandafillov, and others,[3] the ideas of which were reflected in the *1928 Field Regulation*. A great contribution to the creation of the foundations of the theory of deep operation was made by scholars of the Military Academy named for M. V. Frunze and the workers of the *RKKA* Staff. G. S. Isserson, Ye. A. Shilovsky, S. N. Ammosov,

A. N. Lapchinsky, A. I. Sedyakin, K. B. Kalinovsky, S. M. Belitsky, and others working under the leadership of the Chief of the General Staff, A. I. Yegorov, and the chief of the academy, B. M. Shaposhnikov.

With the acceptance in 1929 of the first five-year plan for the reconstruction of the Soviet Armed Forces, there began a search for new paths of further military development, formation of military theory, and more effective methods of armed combat for the defense of the socialist Fatherland responding to the demands of the times. By decree of the Revolutionary Military Council of the USSR, these important and urgent tasks were assigned to the *RKKA* Staff, above all to its Operations Directorate. By the beginning of 1931, the first stage of this work had already been basically completed.

Several months before his tragic death in 1931, Triandafillov gave a lecture to the *RKKA* staff entitled *Osnovnyye voprosy taktiki i operativnogo iskusstva v svyazi s rekonstruktsiyey armii* [Basic issues of tactics and operational art in connection with the reconstruction of the army],[4] in which his basic views on the nature of deep battle and operations were stated in the form of theses, and, as he wrote, an attempt was made "to find an overall, general line in the development of tactics and operational art and new means of combat."

In Triandafillov's opinion, "the major and decisive issue of tactics consists of the fact that in using new types of armaments and combat equipment the possibility is opened of attacking the enemy on the entire depth of his tactical deployment."[5] There is also the possibility of simultaneously using several echelons of tanks (long-range, long-range infantry support, and immediate infantry support) attacking jointly with infantry and supported by artillery and assault aviation deployed in the first zone of the defense. Such a powerful strike ascribed rapidity and urgency to the attack. Deep tactical operations against enemy battle formations also opened prospects for operational art, creating conditions for preparing and conducting modern operations on great expanses; the depth of a simultaneous string of engagements did not have to give way to the depth of the front.

Triandafillov's talk was discussed extensively in the circle of higher command personnel. Chief of Staff of the *RKKA* Yegorov and the Operations Directorate under the leadership of I. P. Obysov concluded the matter begun by Triandafillov. On 20 April and 20 May 1932, *Taktika i operativnoye iskusstvo RKKA na novom etape* [Tactics and operational art of the *RKKA* at a new stage] was heard in the Revolutionary Military Council of the USSR.[6] The ideas stated were of great interest and an important summation of scientific, military-theoretical research being conducted at the beginning of the 1930s. Soon after, on the basis of the tenets advanced in the speech and of opinions and observations coming from the troops, the *Vremennyye ukazaniya po organizatsii glubokogo boya* [Temporary instructions for organizing deep battle] were worked out;[7] in February 1933, after confirmation by the People's Commissar for Military and Naval Affairs, they were sent to the troops as an official guide.

It should be noted that this was a turning point when military art, relying on the experience of World War I and the Civil War, for the most part did not respond to the new level of development of the armed forces.

The step forward made by Soviet military-theoretical thought found the correct perspective of development of means of armed combat, although by this time not a single army in the world had experience in the mass use of armor equipment, aviation, or artillery.

The new theory which was developed was not immediately freed from the burden of old, uncommonly tenacious views. Together with bold and scientifically-substantiated conclusions, erroneous positions which were obsolete for that time were stated. Other extremes were also observed: some comrades gave preference to the most fashionable combat arms (*BTMV* [*bronetankovyye i mekhanizirovannyye voyska*/armored and mechanized troops]) and were distracted by an "arch-revolutionary nature" [*arkhirevolyustionnost'*], striving after super-originality. Thus, for example, Chief of the Directorate for Combat Preparation A. I. Sedyakin in his *Vremennyye instruktsii po glubokomu boyu* [Temporary instructions for deep battle] attempted to reduce the offensive to a single type of activity—the penetration.

In order to achieve a simultaneous penetration of the entire depth of the enemy's tactical defense, Tukhachevsky staunchly proposed that right up to the moment of attack there be a successive introduction into battle of various tank groups at various times: first a long-range tank group, then a long-range infantry support group, and finally a direct infantry support group.[8]

Here he stated that

> one of the main missions of offensive battle is support of the long-range and long-range infantry support tank advance by all assets and support of the suppression of objectives assigned to them. . . . Artillery and aviation . . . in the period preceding the infantry attack are used to assist and support tanks.[9]

Speaking with words he often used in discussions, this was "beginning at the beginning," i.e., World War I. Tukhachevsky's point of view, which gave priority to tanks in battle, held predominance for some time.

K. Ye. Voroshilov made erroneous statements when he announced that he understood "deep battle was one of the varieties of battle and only advantageous for a positional war, where it would be necessary to often penetrate the front of the enemy defense."[10]

However, in the course of an extensive search, experimental exercises and maneuvers, the most correct views and tenets were found which served as a firm foundation for the subsequent development of Soviet military science.

At the expanded Military Council of the National Defense Committee [*NKO*] in December 1934, it was determined that deep battle tactics were not a type but a new form, a new method for conducting various types of combat operations. In his concluding speech Voroshilov rejected his former views and acknowledged that

> any battle is called deep battle . . . modern battle cannot be anything but deep battle. . . . And the issue is not how to understand deep battle, but how to conduct this deep battle in all of its varieties, in all its many manifestations. . . . In this is the main task, and to learn this is more difficult than to conduct scholastic arguments . . . [11]

At this meeting, in a speech which summed up the results of the development of the theory of deep battle, A. I. Yegorov admitted as erroneous the statement that tanks are the pivotal unit in deep battle. Experience showed that the decisive role was played by infantry and, consequently, it was necessary to use all technical assets to support its combat actions.[12] The speaker pointed out the inexpediency of the cumbersome three-level tank structure, which had not justified itself in battle. The creation of two tank groups (long-range and direct infantry support) made it possible to attain a more compact battle formation and to simultaneously advance into the attack along the entire front to penetrate enemy positions.[13]

Based on decisions of the Military Council of the *NKO*, taking into account observations of military districts, and conducting a practical verification of a number of tenets in the troops, the *RKKA* Staff ultimately produced *Instruktsiya po glubokomu boyu* [Instructions on deep battle], which was approved by the People's Commissariat for Defense of the USSR on 9 March 1935.

The well-known military leaders P. A. Belov, N. D. Kashirin, P. Ye. Dybenko, I. F. Fed'ko, I. P. Uborevich, I. E. Yakir, D. A. Kuchinsky, K. A. Meretskov, B. M. Shaposhnikov, and others played an enormous, definitive, even leading role in verifying the theoretical postulates of deep battle tactics in exercises and maneuvers, and in substantiating the generalized views of this theory.

The issuance in 1936 of the new *Field Regulation* (*Temporary PU-36*) can be considered the concluding step in the development of the theory of deep battle and operation; its basic tenets on all types of combat operations were fully reflected in them. The first plan for an operations manual was prepared at this time.

Having thoroughly analyzed the requirements of strategy, the prospects of rearming the Red Army, and the experience of World War I in penetrating a strongly prepared defense, and also having taken into account the mobile nature and deep raids of cavalry in the Civil War, Soviet military science embarked on the correct path, focusing much attention on the development of the theory of deep operation and the tactics of deep battle. It equipped the army with a purposeful outlook.

Above all, various new, powerful means of combat—artillery, tanks, aviation, and air assault troops—served as the basis for the development of this theory. These assets were capable not only of suppressing and penetrating the tactical depth of the enemy defense and acting against his immediate reserves, but also of developing tactical success into operational success with the help of fast-moving, motor-mechanized and cavalry formations [*soyedineniye*] interacting with aviation, and of isolating penetration sectors from

operational reserves being brought up by the enemy from the depth, acting against them by using superlong-range artillery, aviation, and air assault troops.

In light of this, at the end of the 1920s and beginning of the 1930s our views on *front* and army operations were reexamined, and new forms and methods of conducting them were developed.

Deep operation included several stages: **penetration** of the tactical defense was implemented by the joint efforts of infantry, tanks, artillery, and aviation; **development of tactical success** into operational success was achieved by the introduction of masses of tanks, motorized infantry, and mechanized cavalry through the breach formed in the defense, by the activities of long-range aviation, and by the landing of air assaults for the purpose of routing reserves and liquidating the enemy's operational defense; **development of operational success** (operational pursuit) was carried out until the complete routing of the enemy grouping selected as the object of the operation, and the occupation of the next staging position for a new operation. The first stage was the primary one, since without penetration of the tactical defense a deep operation, in general, could not take place, i.e., it was thwarted. In implementing penetration, infantry, artillery, tanks (several echelons) and aviation, cooperating with each other, simultaneously strike enemy battle formations on his entire depth; with one sudden deep and powerful strike break his defense, forming a breach in it; and rush forward to arrive at operational space. Here all combat arms act in the interests of infantry.

The main point in the penetration is to reject linear forms of combat in favor of deep actions against the enemy, which consists of simultaneous annihilation, suppression, immobilization, encirclement, and complete rout of the main grouping, without pushing the enemy out.

It is necessary to bring up mobile troops (tanks, motorized infantry, mechanized cavalry) and to land air assaults into the operational depth of the enemy defense to develop a deep operation from the first stage into the subsequent ones. Only under this condition can a stationary front be penetrated and a mobile character be attached to armed combat.

For a successful offensive, the operational structure of a shock group should always include a penetration echelon—rifle troops (reinforced rifle corps); an echelon for the development of the penetration—mobile troops (tanks, motorized infantry, mechanized cavalry) possessing high mobility and shock force; an aviation group and an air assault group. It is recommended to use on the main direction shock armies (corps) which are well outfitted with combat equipment, transport, and means of communication.

Other important conditions for the success of a deep operation are considered to be gaining superiority in the air, isolating areas of battle from approaching enemy reserves, and preventing the supply of materiel to his attacking forces.

The theory of deep offensive operation advanced a method of conducting combat operations in which shock groups, holding groups, and others, and echelons for penetration and developing the penetration, which were tactically not connected to one another,[14] were joined along the front and into the depth, on the ground and in the air, into a single strike mechanism providing purposeful action against the entire enemy operational grouping until his complete rout. Here, possible forms of maneuver in offensive operations could be a *frontal* strike, a strike along converging directions (double penetration using favorable *front* configurations), a combined strike (organization of several so-called splintering strikes of various strength on a wide front), envelopment (of one or both flanks), and encirclement.

Working out an offensive operation did not overshadow the development of tactical and operational forms of defense, although this was given somewhat less attention, inasmuch as even in the recent past defense did not enjoy popularity among military leaders.

And before World War I hardly a single army in the world considered the defense to be a necessary method of combat. Thus, the well-known French military personality Lucas writes that on the eve of World War I in the French army, "the word 'defense' sounded . . . so heinous that we did not dare make it a subject of exercises in plans, let alone on the terrain." The French army military theoretician Grandmaison even more definitively announced, "Let that mediocrity who recommends a defensive method of operation be damned." In the Russian army the catch-word "vile" defense was widely used for a long time. This was also roughly the attitude toward defense in the German army.

Soviet military specialists, while giving preference to the offense as the primary and decisive form of combat, considered it unavoidable and necessary to master all types of defensive battle and operation. The primary theorists who developed the Soviet theory of operation and tactical defense were N. Ya. Kapustin, D. M. Karbyshev, A. Ye. Gutor, A. I. Gotovtsev, V. D. Grendal', F. P. Sudakov, and others.[15]

"Under modern conditions the defender should be ready to meet an advancing enemy attacking with a mass of tanks on the entire depth of the defense"—thus read the Instructions for Deep Battle. In the field manuals of 1936-1939 it was stressed that defense should be, above all, antitank and deep. As a whole, it was evaluated as a method of operation used to win time, economize, hold especially important regions, and change a disadvantageous correlation of forces. Defense was not an end in itself, but only a method for operational support and preparation of an offensive.

Two types of defense were permitted: positional (tenacious) and maneuver (mobile). The theory of the organization of positional defense was the most thought-out and developed; this was to successfully oppose mass attacks of tanks and aviation and artillery fire of the attacker, and to provide an increase in resistance in case of enemy penetration. The army defensive region was to consist of four zones: forward, tactical, operational and rear, each of which included 1-2 zones. The overall depth of an army defensive zone amounted to 100-150 kilometers.

Such were the overall features of the content of the theory of deep operation, or the theory of deep forms of armed combat developed by Soviet military thought by the end of the 1930s. Its currency was provided by the materiel-technical base being created by the rapidly developing industry of the Soviet Union.

The technical reconstruction of the army achieved great success. This is attested by the following indicators used in the talk by the military commissar for defense at the fourth session of the Supreme Soviet of the USSR in 1939: the number of tanks rose 43 times from 1930; the numbers of airplanes—6.5 times; the quantity of heavy, medium, and light artillery—7 times; the quantity of antitank and tank artillery—70 times; the number of machine guns—5.5 times. If 3.7 horsepower was necessary per fighting man in 1930, then in 1939 this increased to 13 horsepower, despite the fact that during this time the overall numbers of the army grew 3.5 times.

At the same time, the development of the Armed Forces was reexamined. They shifted from a mixed system to a unified cadre foundation. By 1936 the numbers of the cadre army amounted to 1.3 million men, and by 1 January 1939 this had grown to 1.9 million.[16] A large portion of the draftees consisted of workers and collective farm workers [*kolkhoznik*] who had obtained a general education and were acquainted with industrial and agricultural machinery.

Thus, Soviet military theory, reflecting the practical side of the development of the Armed Forces, was the theory of a mass army equipped with the newest technological means of combat.

The theory of deep forms of armed combat occupied an obvious position in the scientific preparation of command cadres. The operations department of the Frunze Military Academy (and subsequently the General Staff Academy), and the Directorate of Combat Preparation systematized and verified the fundamental tenets of this theory based on various exercises and maneuvers. These were the most effective form of verification of theoretical tenets, which, in turn, enriched the practical side of development and preparation of troops and leadership personnel of the Armed Forces.

Thus, troops of all combat arms and more than 1000 tanks participated in maneuvers in the Kiev Military District. The following problems were worked out in them: penetration of a fortified defensive zone by a rifle corps reinforced by tank battalions and artillery of the Reserves of the High Command; development of a penetration by a cavalry corps; use of a large air *desant*; maneuver of a mechanized corps and cavalry division for the purpose of encirclement and annihilation of an enemy grouping which has been penetrated.

In the fall of 1936, the summer preparation of troops was verified in exercises in the Belorussian Military District. Large formations of mechanized troops and aviation, artillery, rifle and cavalry formations, and parachute units participated in the maneuvers.

Later on, valuable theoretical and practical conclusions which played a large role in the subsequent development of our Armed Forces were made with respect to activities of troops on maneuvers. Regarding this, Chief of the General Staff, Marshal of the Soviet Union A. I. Yegorov noted in his observations that "on the

basis of summations and results of maneuver, a number of valuable tactical and operational conclusions can be made, especially in the use of mechanized formations and cavalry."[17]

The General Staff found the answers to many questions of theory and practice (connected, in particular, with the commencement of a future war) in operational and strategic command-staff games. Although the plans used in these games and our ideas about possible troop operations were shattered by the situation which unfolded at the beginning of the war, they played a positive role nonetheless.

Issues of the initial period of war always were at the center of the General Staff's attention. Strategic planning, mobilizational deployment, and preparation and effectiveness of using armed forces in the course of the entire war depend on the successful and correct resolution of these problems in their theoretical and practical aspects. Therefore, from the moment of its formation the General Staff continually (although inadequately) verified them based on military-strategic games and large-scale command-staff exercises which were conducted in the second half of the 1930s.

The military-strategic game conducted by the General Staff according to the plan of operational preparation with troop commanders of border districts on 19-25 April 1936 was demonstrative in this respect.[18]

As documents attest, this crucial game was worked out in the General Staff over an extended period of time and with particular care. Several suggestions made in the course of the game, especially with respect to possible forms and methods of repelling an enemy attack and calculating forces and means of the opposing sides were basically confirmed by the events of 1941. However, a number of principles which were worked out in the game relied on the out-dated experience of World War I. The correlation of forces of both sides was created equal; the main "red" forces were already deployed on the border; possible pre-emption of the enemy in concentration of forces and opening of military operations was not taken into account. The course of the game led the sides to a *frontal* meeting engagement (reminiscent in form of the border engagements of 1914), the outcome of which was not decisive. The factor of surprise (as is known, the Germans attached exceptional significance to this) was not adequately reflected in the game. Thus, they did not succeed in thoroughly verifying our operational potentials or in working out optimal variants of combat against the German-fascist army in the game. However, the game provided great impulse to leadership personnel of the districts and the General Staff, and forced them to reexamine many outmoded concepts.

Many issues which were not properly resolved in 1936 were taken into account in the next game, which was conducted on the theme "The Army Offensive Operation in the Initial Period of War" in 1937 at the Military Academy of the General Staff (I participated in working out the game mission).

Thus, military theory and practice, which mutually enriched one another, were continually the focus of attention of the General Staff and served as a foundation, on the basis of which the Staff built its operational calculations and suggestions and prepared the armed forces for the protection of the country against encroachments of imperialist aggressors.

Soviet theory of deep battle and operation, which was developed in the middle of the 1930s and reflected in our regulations, was enriched by new principles, taking into consideration the achievements of science and technology.

It can be said without exaggeration that in no army in the world was there such a deep and thoroughly developed military theory as in our Armed Forces.

Lately in print there have been statements concerning who was, so to speak, the pioneer or founder of the theory of the forms of armed combat. It seems to me that searching for concrete authors of this theory is fruitless. The theory of deep operation and deep battle, founded on Marxist-Leninist methodology and the richest experience of the Civil War and other wars, and relying on the new materiel-technical base of the socialist state and military doctrine emerging from the politics of the Communist Party, was advanced by life itself. And a large collective of scholars, practitioners of military affairs, and leadership personnel of the Red Army, including the Staff of the *RKKA* and the General Staff, participated in its scientific substantiation and the verification of its principles.

Priority in the development of this theory indisputably belongs to Soviet military science. Before 1936 there was not even mention of the operation and tactics of deep battle in the works and official manuals of the German and other armies (except for Eimansberger's book *Tank War*, in which lightning forms of tank strikes

were recommended). It is true that in 1935 the German journal *Militaer Wochenblatt* in the article "A Modern Genghis Khan," pointed out the innovation of ideas stated in G. S. Isserson's book *Evolyutsiya operativnogo iskusstva* [The evolution of operational art], in which the issues of deep operation were summarized. Only after 1936 in works published by German generals does one see how German military thought distortedly interpreted Soviet ideas of new forms of armed combat.[19] In this respect, the book *Attention, Tanks!* by inspector of tank troops of the German-fascist army General Guderian, published in 1938, is representative. This theorist, brutally defeated more than once during the Great Patriotic War, considered tanks to be the single asset capable of penetrating a defense and developing the strike. He treated infantry as an auxiliary combat arm which could "only consolidate success." Guderian rejected close interaction of tanks with infantry, calling this "suicide." The same insignificant role was given to artillery and other ground combat arms, which were to act exclusively in the interests of tanks. Only aviation was acknowledged as an asset capable of covering tanks from the air and destroying enemy reserves. Guderian proposed to use tanks in the offensive in four echelons in roughly the same formation which Soviet military specialists had already envisioned in 1933-1934. Having come to believe in this far from perfected plan which had been rejected by us, Guderian and all the general officers devised nothing different before the end of World War II. In connection with this, statements by General Manstein that during the last war the Soviet command borrowed from the Germans the expedient organization of tanks (the creation of tank and mechanized corps) and adopted their method of deep penetration are completely contradictory with historical truth.

The Great Patriotic War confirmed the correctness of the basic principles of the theory of deep operation (especially in using echelons of development of success), especially in 1942, when the offensive of Soviet troops began with the penetration of the enemy defense in which mobile troops (tank armies, tank and mechanized corps) were subsequently introduced to develop operational success into strategic success.

The theory of deep operation has not lost its significance today. It can serve as a basis for the creative use by command cadres in resolving many-sided and complex modern problems. Lenin pointed out that "Marxism demands the unconditional historical reexamination of the issue of forms of struggle. To pose this question in a non-historical, concrete situation means not understanding the alphabet of dialectical materialism."[20]

ENDNOTES

1. M. Zakharov, "O teorii glubokoy operatsii," *Voyenno-istoricheskiy zhurnal* [Military-historical journal], 10 (October 1970), pp. 10—20. The article was prepared from the manuscript of Zakharov's book *General'nyy shtab v predvoyennyye gody* [The General Staff in the prewar years], published by Voyennoye Izdatel'stvo.
2. See M. V. Frunze, *Izbrannyye proizvedeniya* [Selected works], Vol II (Moscow: Voyenizdat, 1957), pp. 133, 134.
3. M. N. Tukhachevsky, N. Ye. Varfolomeyev, Ye. A. Shilovsky, *Armeyskaya operatsiya* [The army operation] (Leningrad: 1926); A. K. Kolenkovsky, *O nastupatel'noy operatsii armii vkhodyashchey v sostav fronta* [On the offensive operation of an army as part of a *front*] (Moscow: 1929); V. K. Triandafillov, *Kharakter operatsiy sovremennykh armiy* [The nature of operations of modern armies] (Moscow: 1929); and others.
4. Central State Archives of the Soviet Army, *fond* 37977, *opis'* 3, *yed. khr.* 368, *listy* 963—1021.
5. Ibid., *listy* 963, 977.
6. Ibid., *listy* 845—887.
7. Ibid., *ed. khr.* 336, *listy* 548.
8. Ibid., *ed. khr.* 365, *listy* 246.
9. Ibid.
10. Archives of the Ministry of Defense, *fond* 112a., *opis'* 796 *delo* 59, *listy* 402.
11. Ibid., *delo* 65, *listy* 486.
12. Ibid., *listy* 14.
13. Ibid., *delo* 59, *listy* 16.
14. In the Great Patriotic War, the echelon for developing the penetration included mobile troops—tank armies, tank mechanized formations and cavalry formations.
15. N. Ya. Kapustin, *Operativnoye iskusstvo v pozitsionnoy voyne* [Operational art in a positional war] (Moscow: 1927); D. M. Karbyshev, *Inzhenernoye obespecheniye oboronitel'nykh operatsiy* [Engineer support of defensive operations] (Moscow: 1938); D. M. Karbyshev, *Inzhenernoye obespecheniye boyevykh deystviy strelkovykh soyedineniy* [Engineer support of combat operations of rifle formations] (Moscow: 1939); A. Ye. Gutor, *Oborona korpusa na shirokom fronte* [Corps defense on a wide front] (Moscow: 1939); A. I. Gotovsky, *Oboronitel'nyye deystviya strelkovykh divizii* [Defensive actions of rifle divisions] (Moscow: 1926); V. D. Grendal', *Artilleriya v osnovnykh vidakh boya* [Artillery in basic types of battle] (Moscow: 1940); F. P. Sudakov, *Armeyskaya oboronitel'naya operatsiya* [The army defensive operation] (Moscow: 1940).
16. Archives of the Ministry of Defense, *fond* 15a, *opis'* 1842, *delo* 1, *listy* 24-32, 113; *opis'* 2154, *delo* 4, *listy* 27.
17. Central State Archives of the Soviet Army, *fond* 33987, *opis'* 3, *delo* 838, *listy* 152.
18. Ibid., *fond* 37977, *opis'* 4, *dela* 2, 3, and 10.
19. *Voyennyy zarubezhnik* [Military foreigner], 1939, No. 8.
20. V. I. Lenin, *Polnoye sobraniye sochineniy* [Complete collection of works], Vol. XIV, pp. 2, 3.

ON THE ISSUE OF THE ORIGIN AND DEVELOPMENT OF THE OPERATION[1]

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One of the unresolved problems of the history of military art is the question of the time of the origin of the operation as a form of armed combat. Until now we have encountered its being dated from various historical epochs. This happens because the operation as a form of military action, before reaching its modern level, covered a long and complex path of development, so that to determine more or less precisely the moment of its origin is a rather difficult matter.

In the given article an attempt is made to examine the issue of the evolution of both the concept itself of the operation and its content.

The word "operation" is of Latin origin. It means action (*operatio*). In military science and in military history the combination "military operation" was most often used. This term began to be used in works of the seventeenth century to indicate a system of military actions. Thus, the Austrian General Montecucculi in the fourth chapter of his book *Notes of Count Raimond Montecucculi, or Primary Rules of Military Science*, published in 1664, wrote about "military operations" and conditions necessary for their successful conduct. Among the basic "military operations" which require good organization and support, the author included the march and deployment for rest,[2] i.e., two systems of purposeful actions.

In 1784 in London there appeared a book by the bourgeois military theoretician Henry Lloyd, *Military and Political Memoirs of General Lloyd*, in which was stated the exceptionally correct, as it turned out, idea about the logical integrity of the troop actions within the framework of an operation and the homogeneity of the term "operation." In analyzing the practical experience of activities in the Seven Years War, Lloyd focused attention on the fact that the achievement of the ultimate aim of the war, as a rule, arises from troop actions directed toward the resolution of a number of intermediate missions (aims). Here, the achievement of the indicated aims was the totality of repeated military actions—relatively uniform in nature and sequence of military actions (concentration of forces, march-maneuver, battle, threat to communications)—the beginning and end of which are limited by two points on the terrain: the "base" (magazine)[3] and some indicated point on one's own or foreign territory. Lloyd called all this the operation.

Completing the foundation of the logical integrity of the operation, Lloyd mentally joined the base and end point of the operation by a single line, along which the army was to proceed, and called this the "operational line."

From this moment the operation began to be considered not as any totality of military actions, but only that which was encompassed by a geometric model: "base"—"operational line"—"end point" (see sketch 1). Thanks to this discovery, as Lloyd considered it, the time arrived when "one can calculate all operations with geometric precision."[4]

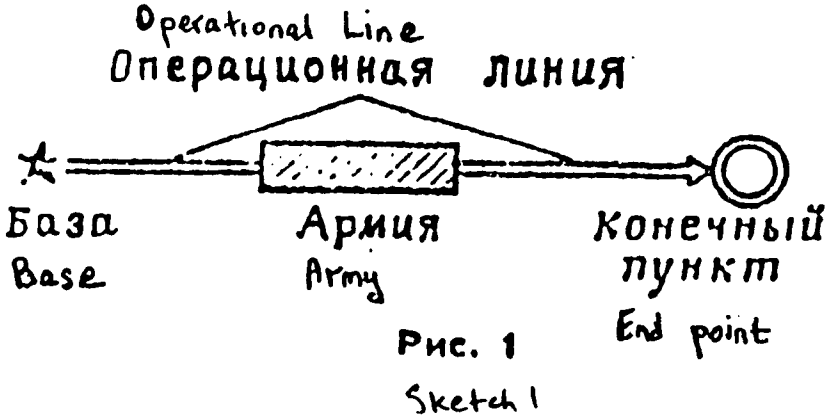

Рис. 1

Sketch 1

Lloyd's geometrism was adopted and thoroughly developed by the military theorist G. Bulow in his book *The Spirit of the Newest Military System* (1799). Bulow unreservedly ordered that "each military operation be based on three points: the subject or foundation of the operation, the operational line, and the object."[5].

In developing Lloyd's theory, Bulow demonstrated that the operation having at its disposal only one magazine facility is poorly supported. Therefore, it must be based, in his opinion, on a system of storage facilities forming a line—base. In such a case, its geometric form will have a slightly different look (sketch 2).

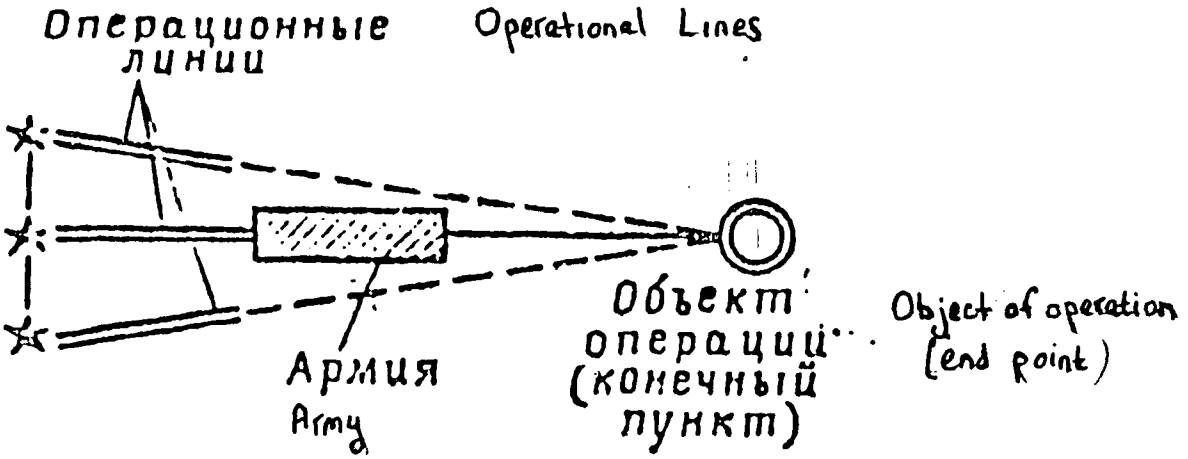

Рис. 2

Sketch 2

In addition to the enumerated problems, Bulow developed an entire series of new ones connected with the first ones. He attached especially important significance to the issue of aims of the operation. In his opinion these could be the rout of the enemy, siege of a fortress, and threat of engagement (demonstration), but most often—in the epoch of cordon-maneuver strategy—disruption of the enemy's supply system.

The achievement of the aim of the operation was always connected with movement (march) and occupation of a specific geographic point, i.e., the object of the operation. However, this was not always accompanied by battle.

Bulow was the first to attempt to divide all military art into strategy and tactics. He proposed the term "strategy" itself, which meant (according to Bulow) the field of military art which has as its object the preparation for and conduct of war. He wrote, "Strategy is the science of movement in which the enemy is the goal but not the object."[6] Bulow explained the content of strategy and tactics by means of a model example: "... where there is an exchange of blows, this is tactics; where there is no battle, this is strategy."[7]

Bulow's ideas found a broad response among military theorists of all European countries. For example, Archduke Karl of Austria wrote

> Each operation relies on a base, has as its aim the achievement of the operational objective, and is conducted along operational lines which join the base and the objective. The operation encompasses either the flow of the entire war or that of the entirety of a single campaign; or it attempts only to occupy some strategic point and achieve advantages connected with it.[8]

The outstanding authority in the field of military theory, A. Jomini, general of the French and then the Russian armies, took much from Bulow. He was a theorist of the wars of revolutionary and Napoleonic France, i.e., of the time when mass bourgeois armies were created, the mixed requisition-magazine system of supply was introduced, and "shock strategy" was formed to counterbalance the cordon-maneuver strategy of the period of the Seven Years War. Therefore, according to Jomini's theoretical plan, the objective of the operation was considered to be not a "geographic point," but rather the enemy army; the basic principle of his theory became the concentration of forces for a decisive engagement for the purpose of annihilating the enemy. For

Jomini, "military art consists of introducing as great a force as possible into battles at the decisive area of the theater of operations . . . "[9] And if rivers of sweat from soldiers exhausted by long, often purposeless marches are seen through the geometrism of Bulow's system, then a sea of blood of general engagements is perceptible through the practicality and bourgeois efficiency of Jomini's system.

Jomini, like his predecessors, related issues of the preparation for and conduct of war to the field of strategy, the content of which he enriched with the new concepts of "operational zone," "operational front," and others.[10]

Thanks to the rather broad dissemination of work of the above-mentioned authors at the end of the eighteenth and beginning of the nineteenth centuries, the new terminology permeated armies and was persistently connected with the practice of armed combat. Thus, in the military documents of A. V. Suvorov, M. I. Kutuzov, and other Russian military leaders, we find everywhere the terms "operation" and "operational line."[11]

In the second half of the nineteenth century, an attempt was made in Russian military literature to provide a scientific definition of operation and demonstrate its place in the theory of military art. The most precise formulation was given in *Entsiklopediya voyennykh i morskikh nauk* [The encyclopedia of military and naval sciences]:

> Each war consists of one or several campaigns, each campaign of one or several operations, which represent a certain complete period, from the **strategic deployment** of the army at the initial line of the operation until the ultimate resolution of the latter by means of a **triumphant** battle on the battlefield, if the battle was prefaced by encirclement of the shattered army; in the opposite case—by means of energetic exploitation of the victory won by means of pursuit on the battlefield and on the theater of military actions [emphasis in the original].[12]

In the same publication it was directly indicated that the preparation for and conduct of an operation is the prerogative of military strategy. In another place it was emphasized that "each operation embraces all of strategy . . . "[13]

G. A. Leer was an undisputed authority in the field of the theory of operations in Russia and abroad for more than 40 years. His works on strategy, which have been published since the middle of the 1860s, brought him particularly great renown and praise.[14]

We are indebted to him to a significant degree for the fact that large strategic operations in theoretical and historical works came to be known by the name of the populated area, river, or geographic object along which they were being conducted. Thus, in the work *Korennyye voprosy* [Fundamental issues] he mentioned Napoleon's St. Gondskaya operations (1814), and then analyzed in detail the "Ulm Operation" (1805) and many others.[15]

In the wake of Leer in the field of the development of military theory appeared N. P. Mikhnevich, who in working out issues of strategy proceeded from the definitions of war and operation worked out by the Leer school.[16] He went significantly farther than Leer in the investigation of problems of preparation for and conduct of operations in the initial period and in the study of the stages and individual elements of a strategic operation.

A. A. Neznamov worked simultaneously with N. P. Mikhnevich on the problems of strategy, based, as was Mikhnevich, on the works of his predecessors. He wrote:

> As the entire war breaks down into an complete series of operations, so each operation breaks down into an complete series of partial **immediate missions** in which the preceding one conditions the following one and they all join together into a single aim of the operation in absolutely the same way as all the operations are connected to one another by the **primary, leading idea of the war plan "in aim and direction"** [emphasis in the original].[17]

Neznamov considered the crown of the entire operation to be the general battle [*srazheniye*]. "The general battle," he emphasized, "is what any operation is inclined towards, it is its logical end."[18]

Principally new in Neznamov's strategic views was the posing of the problem of conducting strategic operations not by individual armies but by groups of armies, i.e., by operational large formations (*operativnoye*

ob"yedineniye), which had arisen recently. According to Neznamov's concept, within the framework of an operation were groups of armies, each of them implementing its own army operation. This already was a qualitatively new stage in the development of the theory of the operation. However, the armed forces still did not have sufficient combat experience to thoroughly investigate this problem.

The fundamental tenets of military thought of the seventeenth through nineteenth centuries which have been examined concerning the operation make it possible to draw a conclusion that the military theorists of the indicated period made a signific nt contribution to the development of the theory of strategic operation. Above all they succeeded in revealing the essence of the given phenomenon and correctly evaluating its role in military art. However, in the opinion and concepts of all the authors of that time there were serious shortcomings and thoroughly erroneous statements. Thus, Lloyd's works suffered from mechanism. Bulow was extremely carried away by geometrism and overlooked the onset of a new epoch in military affairs. Jomini (on the basis of the experience of the Napoleonic Wars) declared it absolute that the operation behaved acc rding to internal operational directions. Several Russian military theorists remained for a long time adherents of the erroneous Leerian positions on the "timelessness and immutability" of the principles of military art, etc. The main reason for this was the idealistic metaphysical method of cognition by which bourgeois science was guided.

In examining issues concerning the time of the origin of the operation, one cannot fail to take into consideration several tenets of the classics of Marxism, in particular Engels' statements on military campaigns in the period of slave-owning and feudal societies. Engels considered that the military campaigns of the armies of the ancient world and Middle Ages were not different from operations. Thus, in characterizing the features of military art in the period from the sixth through the twelfth centuries, he noted that feudal particularism made it "impossible to have any kind of large operations." Therefore, they were extremely rare. "Over this entire period," Engels pointed out, " . . . the only significant operations were the campaigns of the German emperors into Italy, and the crusades."[19]

In describing the military-historical events of the slave-owning and feudal society, Engels attempted as much as possible to separate in each operation (campaign) three primary elements: the operational base, operational line, and object of the operation. This is especially characteristic for the work *On the History of the Ancient Germans*, where he writes about the town of Mainz, which was the operational base in southern Germany, on the most convenient operational line for the main Roman forces, and the object of the operation.[20]

Further development of the theory of preparation for and conduct of operations occurred under the influence of material factors which were engendered by the epoch of imperialism. The appearance at the beginning of the twentieth century of armies numbering in the millions and the commencement of arming troops with rapid-fire small arms and artillery, which forced the rejection of a dense infantry formation, led to an expansion of the front of strategic deployment and, especially important to emphasize, the expansion of the form of armed combat.

Thus, if in the period of the Franco-Prussian War in the engagement at Gravelotte 430,000 Germans and French conducted military actions on a 12-km front, already in 1904 during the Russo-Japanese War 380,000 Russians and Japanese fought on a front of up to 100 kilometers on the Shakhe River. World War I provided even more striking examples. In the Battle of the Marne (1914), 600,000 Germans and French had a front of around 300 kilometers, and in that same year the front line of the Battle of Galicia, in which 500,000 Russians and Austrians took part, extended over 400 kilometers.

Railroads and the electric telegraph played a large role in the development of all processes in the conduct of operations. With their appearance it became possible to conduct the strategic deployment of troops at higher tempos, provide supplies, and create a dynamic system of control of army large formations and corps scattered over the enormous expanses of the *TVD* [*teatr voyennykh deystviy*/theater of military actions].

All this led to significant qualitative changes in the forms of armed combat. For the most part, its content also changed. The outcome of military confrontation began to be decided not by a single general battle but by the totality of engagements, battles, and maneuvers conducted on enormous territories according to a unified plan. In these, not only large ground force formations but also other combat arms now participated. New phenomena required thorough theoretical comprehension and practical mastery.

This task was successfully resolved by Soviet military science. In particular, A. A. Svechin, professor of the Academy of the *RKKA*, who approached the resolution of the issue from positions of historical analysis, made a significant contribution to working out the indicated problem. He stated that the "recently discovered" phenomenon was nothing more than a new historical step in the development of a long-known form of military action, i.e., the operation.

In analyzing the processes of armed combat, Svechin demonstrated that under new conditions within the framework of an army operation, there occurred a mutual penetration, even a confluence, of the engagement and the march-maneuver. A new amalgam of operational elements occurred. Svechin wrote

> Quantity is shifting to quality. The engagement formerly had only slightly noticeable fissures which divided it into individual battles. An increase in the expanse of the engagement led to the fact that the engagement has been broken up into separate pieces which are connected only in a whole operation.
>
> If formerly the operation was divided into maneuver and engagement, then now we must establish other boundaries; now they maneuver partly on rail, partly in the very whirlpool of combat events, attempting to group individual battles to achieve the aim of the operation. Maneuver has partly given way to operational deployment, and is partly sandwiched between individual battles . . .[21]

Proceeding from the above, Svechin provides a new definition of operation: "We call an operation that act of war in the course of which the efforts of the forces are directed without interruption in a specific area of the TVD for the achievement of a specific intermediate aim."[22] Such eminent Soviet military leaders and theorists as M. V. Frunze, A. I. Yegorov, S. S. Kamenev, M. N. Tukhachevsky, I. P. Uborevich, B. M. Shaposhnikov, V. K. Triandafillov, and others also made a great contribution in the period of the 1920s-1930s to the development of the theory and practice of preparing for and conducting an operation.

In the course of the further development of military art, especially in the period of World War II, the scope, nature, aims, and missions of the operation changed. The modern operation is defined as

> the totality of coordinated engagements, battles, and strikes, mutually connected in aim, location, and time, conducted on a TVD or strategic (operational) direction according to a uniform plan and plan for resolving strategic, operational-strategic, or operational missions.[23]

The short analysis we have presented of the development of military thought from the end of the eighteenth to the beginning of the twentieth century makes it possible to draw the conclusion that the theoretical working out of the problems of the operation already had begun in the eighteenth century. However, the operation itself as an objective phenomenon of armed combat originated significantly earlier. Its sources must be searched for in the remote past. This is confirmed as well by the research of several Soviet military historians who devoted a number of their works to the examination of military operations of the slave-owning, feudal, and capitalist societies.[24]

Issues of the origin and development of the operation, in our opinion, should find suitable reflection in modern works on the history of military art.

ENDNOTES

1. R. Savushkin, "K voprosu o vozniknovenii i razvitii operatsii," *Voyenno-istoricheskiy zhurnal* [Military-historical journal], 5 (May, 1979), pp. 78—82.
2. See Ye. A. Razin, *Istoriya voyennogo iskusstva* [History of military art], vol. 8 (Voyenizdat, 1961), p. 540.
3. Magazines (storehouses) were created on the eve or in the course of the war most often in fortresses. In them were concentrated ammunition, food, forage, and uniforms. From here all types of provision were supplied to the troops by cart trains.
4. *Strategiya v trudakh voyennykh klassikov* [Strategy in the work of military classics], vol. 1 (Moscow: Vysshiy redaktsionnyy sovet, 1924), p. 21.
5. Ibid., vol. 2, p. 36.
6. Ibid., p. 57.
7. Ibid.
8. Ibid., pp. 92—93.
9. Ibid., p. 123.
10. A. Jomini, *Essays on Military Art*, Vol. 1 (Voyenizdat, 1939), p. 88.
11. See, for example, A. V. Suvorov, *Dokumenty* [Documents], Vol. 4, Voyenizdat, 1953, pp. 200—202, 293—296, 310—311; M. I. Kutuzov, *Sbornik dokumentov* [Collection of documents], Vol. 4, part 1, Voyenizdat, 1954, pp. 85, 112, 115, 266, 268—269.
12. *Entsiklopediya voyennykh i morskikh nauk*/Encyclopedia of military and naval sciences, vol. 5, (SPb, 1891), pp. 456—457.
13. Ibid., p. 457.

14. For more details about Leer's work see G. P. Mesheryakov, *Russkaya voyennaya mysl' v XIX veke* [Russian military thought in the nineteenth century] (Moscow: Nauka, 1973).
15. *Strategy in the Works of Military Classics*, vol 2, pp. 277, 280.
16. *Strategiya* [Strategy], book 1. Compiled by General of Infantry N. P. Mikhnevich (SPb, 1911), p. 152.
17. *Russkaya voyenno-teoreticheskaya mysl' XIX i nachala XX vekov* [Russian military-theoretical thought of the nineteenth and beginning of the twentieth centuries] (Voyenizdat, 1960), p. 557.
18. Ibid., p. 612.
19. K. Marx and F. Engels, *Works*, Vol. 14, p. 26.
20. Ibid., vol. 19, pp. 456, 457, 458, 459, 463.
21. *Voprosy strategii i operativnogo iskusstva v sovetskikh voyennykh trudakh (1917-1940)* [Problems of strategy and operational art in Soviet military works (1917-1940)] (Voyenizdat: 1965, p. 241).
22. Ibid., p. 219.
23. *Sovetskaya voyennaya entsiklopediya* [Soviet military encyclopedia], Vol. 6 (Voyenizdat, 1978), p. 64.
24. A. A. Svechin, *Evolyutsiya voyennogo iskusstva* [The evolution of military art], vol. 1 (Moscow-Leningrad: 1927). On operations of the slave-owning society, see pp. 44, 79; that of the feudal society—pp. 210, 213; that of the capitalist society—pp. 337, 353, 358, 361. *Voprosy strategii i operativnogo iskusstva v sovetskikh voyennykh trudakh* [Problems of strategy and operational art in Soviet military works], pp. 222—228, 238—241. N. A. Levitsky, *Polkovodcheskoye iskusstvo Napoleona* [Napoleon's art of military leadership], (Voyenizdat, 1938), pp. 100, 110, 140, 186. G. Isserson, *Voyennoye iskusstvo epokhi natsional'nykh voyn vtoroy poloviny XIX veka* [Military art of the epoch of national wars in the second half of the nineteenth century], (Moscow: Izdatel'stvo VAF), 1933, pp. 11—111.

ON THE ISSUE OF THE ORIGIN OF THE THEORY OF SUCCESSIVE OFFENSIVE OPERATIONS (1921-1929)[1]

Colonel R. Savushkin, candidate of historical sciences

The theory of successive offensive operations in our country began its development in the 1920s on the basis of a generalization of experience of World War I and the civil war. It is natural that Soviet military theorists focused particular attention on the investigation of events closest to them, i.e., the events of the civil war. The offensive of the troops of the Western Front against the White Poles, from the line along the Berezina River to the ultimate line along the Vistula River (July-August 1920) was taken as the most typical example of successive operations. It developed in the following way (see sketch 1).

From 4-7 July 1920, the Western Front began the July Operation and inflicted a serious defeat on the enemy. Under the blows of the Soviet troops, the White Poles were compelled to withdraw. The armies of the Western Front went over to the pursuit, which continued for around a month. In the course of this, the enemy attempted to hold the Soviet forces on two lines (the first—along the Neman and Shara Rivers, the second—along the Narev and Western Bug Rivers), where the attackers had to conduct bitter engagements. Finally, on 9 August the troops of the Western Front arrived at the line Mlava, Sedl'tse, Lyubartuv, and from here began a "decisive offensive" (engagement at the Vistula). However, the Polish command was able to strengthen its forces and go over to a counteroffensive. Weakened in preceding battles and without reserves, the troops of the Western Front were compelled to withdraw to the line Lipsk, Svisloch', 15 kilometers east of Brest-Litovsk, where the further advance of the Polish army was stopped.[2]

In analyzing these events in his work *Pokhod za Vislu* [Campaign for the Vistula] (1923), M. N. Tukhachevsky came to the conclusion that it is impossible to rout an enemy army prepared for war "by one blow," and that it is necessary to resolve this task by means of conducting a series of successive offensive operations. Only "a number of successively conducted offensive operations joined by uninterrupted pursuit," he wrote, "can replace that destructive engagement which was the best type of encounter in former armies . . . "[3] These ideas received comprehensive development in his book *Voprosy vysshego komandovaniya* [Problems of higher command][4] and in the collective work *Armeyskaya operatsiya* [The army operation].[5]

Subsequently, issues of successive operations were illuminated in the work of V. K. Triandafil'ov *Razmakh operatsiy sovremennykh armiy* [The scope of operations of modern armies].

> The center of gravity of a series of successive operations lies not in their commencement but in their conclusion. The theory of a series of successive operations envisions a decisive encounter with the entirety of the enemy's main forces (and this is entirely correct) at the end or before the very end of the operation . . . [6]

Therefore, efforts in successive operations, according to the author, should not diminish, but rather increase.

N. N. Movchin made a significant contribution to the theory of successive offensive operations. In his work *Posledovatel'nyye operatsii po opytu Marny i Visly* [Successive operations according to the experience of the Marne and the Vistula], he indicated that military actions of the right wing of the German armies at the beginning of World War I developed not in the form of one gigantic operation for encirclement as was planned (sketch 2), but in a series of successive operations: border engagement (operation); strategic pursuit, in the course of which combat actions were conducted to rout withdrawing troops on intermediate lines; the Marne engagement (operation) in which the plans of the German command were frustrated by the unexpected actions of the Anglo-French troops.

On the basis of research which was conducted, N. N. Movchin came to a conclusion concerning "the impossibility under modern conditions of destroying an entire enemy army in one operation."[7] He was the first military theorist to propose the division of successive operations into the initial operation, pursuit operation, and decisive operation.[8]

An important role in the improvement of the theory of successive operations was played by the work of the IV Directorate of the *RKKA* Staff, *Budushchaya voyna* [Future war] (1928), in the development of which participated M. N. Tukhachevsky, Ya. K. Berzin, A. N. Nikonov, and Ya. M. Zhigur. Together with other

Схема 1. Последовательные операции в советско-польской войне 1920 г.
Successive operations in the Soviet-Polish War, 1920

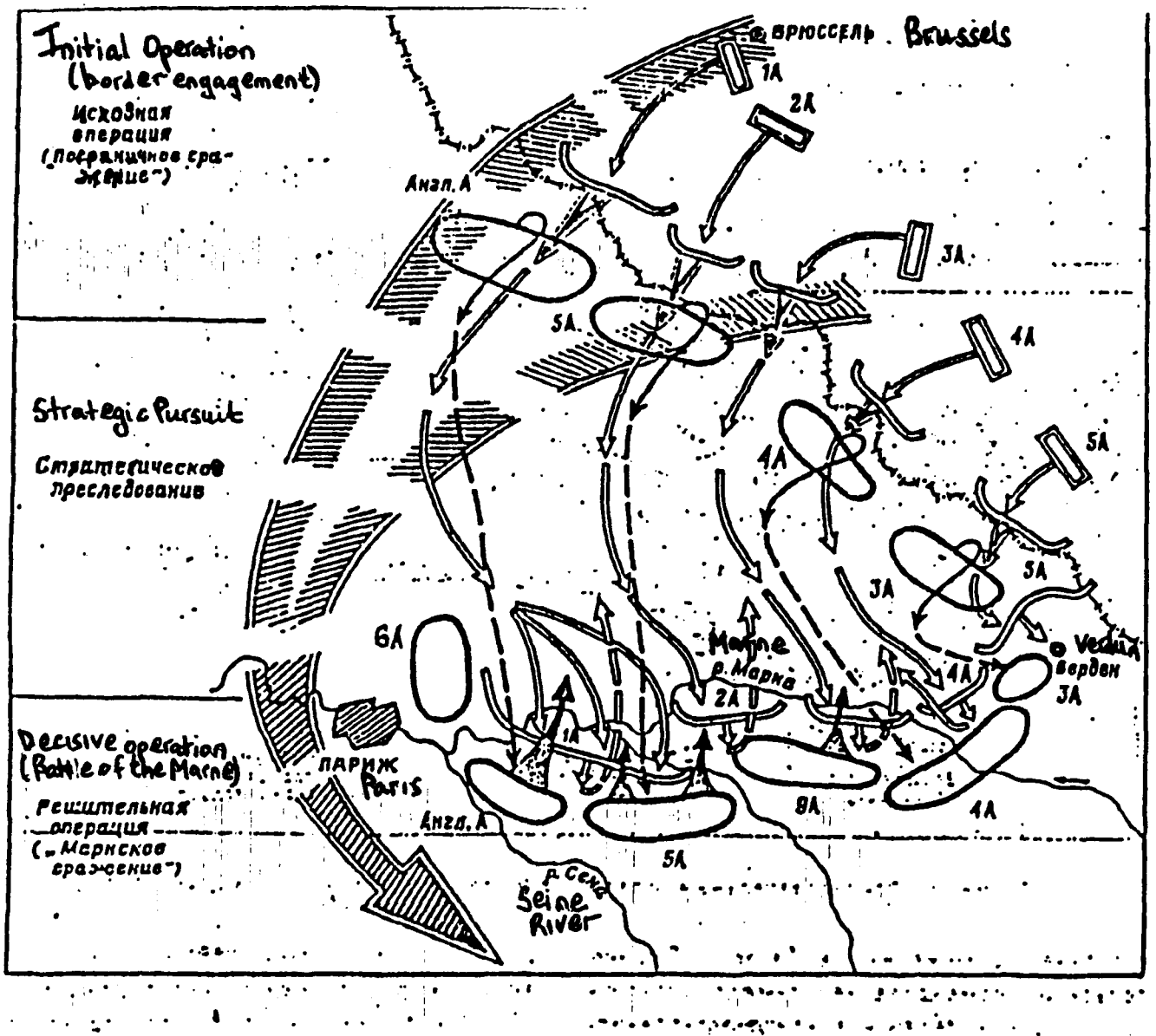

Схема 2. Последовательные наступательные операции германской армии на западном театре в кампании 1914 г.

Successive offensive operations of the German Army on the western theater in the 1914 campaign

issues, the nature of successive operations, missions resolved in the course of their conduct, and conditions for achieving the ultimate aims were revealed in the work. In the work it was pointed out that

> To destroy enemy forces which, in the presence of sufficient materiel and human resources and a sufficient depth of the TVD, will continually be nourished and replenished from the depth of the country, it is necessary to conduct a series of offensive operations, appropriately assigned with respect to time and space. By means of the combination of operations, it is necessary to force the enemy to

exhaust his materiel and human resources or compel the enemy to accept battle for his main mass of troops under conditions unfavorable for him, and then to liquidate them.[9]

The capstone of the development of the theory of successive offensive operations in the 1920s was, in essence, Triandafillov's book *Kharakter operatsiy sovremennykh armiy* [The nature of the operations of modern armies] (1929), which had several editions,[10] and A. K. Kolenkovsky's work *O nastupatel'noy operatsii armii, vkhodyashchey v sostav fronta* [On the offensive operation of an army as part of a *front*] (1929). Thus, the theory of successive offensive operations was the fruit of the collective work of many Soviet military theorists. It was engendered by objective conditions and was based on historical experience.

In a series of successive *front* offensive operations, the initial operation occupies a special place, since everything which follows depends on its success (sketch 3). In the course of this operation, a strike against the enemy's main grouping had to be inflicted, forcing him to leave the occupied defensive zone and withdraw to the rear lines for the purpose of regrouping forces and replenishing with reserves.

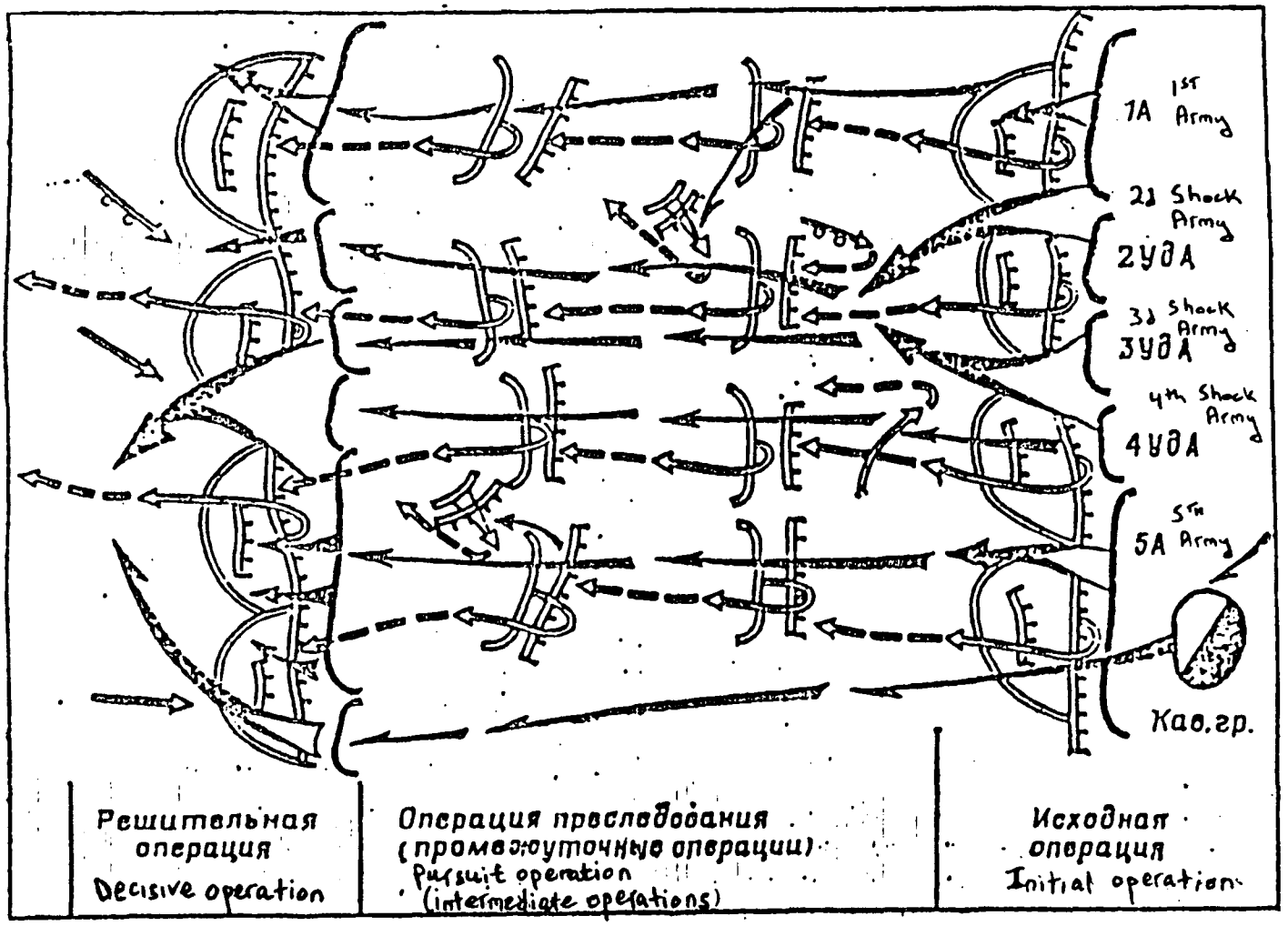

Схема 3. Последовательные операции фронта по взглядам 20-х годов
Successive front operations according to views of the 20s

The impossibility of a complete rout of the enemy grouping in the initial operation was explained, above all, by the attacker's lack of long-range means of suppression and by the deep operational structure of enemy forces in the defense. According to foreign opinions of the 1920s, first-echelon divisions could occupy a defense at a depth of 4-6 kilometers. Corps reserves were deployed 8-10 kilometers from the forward edge of the defense. Army reserves were 20-35 kilometers, part of the army reserves on automobiles were 80-100 kilometers, and reserves of the army group were even further from the forward edge. Triandafillov wrote

> Simultaneously with engagement in battle, the defender adopts a whole series of measures to reinforce the troops being attacked. First the immediate reserves . . . arrive here. If the center of events is located on a direction which is important from the point of view of conducting the war (and the operation), then deeper reserves and even forces taken from other fronts (or parts of fronts) arrive here. If the reserves begin to arrive quickly and in sufficient quantity, then the operation can enter a new phase and last for a very long period of time . . . [11]

Under more favorable conditions, it is considered possible to penetrate the front of the enemy's defense and create a threat to his flank and rear. However, the lack of means for implementing a decisive maneuver at high tempos and the low mobility of advancing forces made it impossible to preempt the enemy in arriving at routes of withdrawal and to prevent him from slipping out from under the strike. All this made it necessary to conduct successive operations.

The purpose of pursuit operations was to inflict a subsequent partial strike on the enemy and create conditions which would make it difficult for him to realize his attempts, by means of a mobile (maneuver) defense, to gain time, regroup forces, bring up his reserves, and create a new defensive front. For the attacker, the primary substance of the given operations was uninterrupted pursuit while simultaneously preparing the decisive operation.

The decisive operation arose on the one hand as a result of the withdrawing forces' desire not to lose primary vital centers, thus depriving themselves of the possibility of further combat, and on the other hand as a result of the pursuers' attempt to reach the enemy army and, by seizing those centers, deprive him of the capability of continuing the conflict. The purpose and main content of the decisive operation was the completion of the rout of enemy armed forces on a given direction, the enemy being unsuccessful in regrouping and reinforcing using reserves, or being forced to halt the withdrawal because of a lack of available space (sufficient depth of territory).

It was proposed that in practice the missions of the so-called "pursuit" could not be resolved in a single operation. After the initial operation there had to follow not one but several "intermediate operations," leading the troops up to the decisive operation.

The primary indicators of successive operations of a front are as follows (compiled on the basis of numerical data in Triandafillov, *Nature of the Operations of Modern Armies*, pp 148, 157, 171, 184, 185—187, etc.):

Nature of operation	*Depth (km)*	*Tempo (km/day)*	*Duration (days)*
Initial	30-50	5-6	5-6
Intermediate	150-200	8-10	18-20
Decisive	30-50	6-7	5-6
Average	250	6-7	30

On the average, the offensive zone of a *front* which consists of 5 armies can be up to 400 kilometers at the initial position; the depth of operation is 250 kilometers, the average tempo is 6-7 kilometers, and duration is 28-32 days.

The most typical means for resolving missions in an initial and decisive *front* operation were considered the following: penetration with a subsequent avalanche-type advance of the main forces on the side of the denuded flank and rear of the enemy's primary grouping; penetration with subsequent frontal pressure and radial-type advance as a measure of the extent of penetration into the enemy deployment; a "concentric operation" or encirclement operation.[12] The most effective method was considered the encirclement of the enemy, which, under favorable conditions, could lead to the destruction of a significant portion of his armed forces. However, such a method of combat action, in the opinion of the authors, required a much greater

quantity of forces than a frontal offensive. Considering the fact that the Red Army still did not have sufficient forces, the following conclusion was made:

> Modern means and the organization of the armies of our western neighbors, as well as the means of the Red Army, do not in any way assure the success of such operations. The success of such operations, considering the present state of the armies, can only be haphazard.[13]

In developing operations using a frontal offensive, it was pointed out that they could provide for inflicting destruction on the enemy only under specific conditions. Moreover, in one of Triandafillov's works the following was stated:

> Such a ram [i.e., a frontal strike], even if it was on a properly chosen operational direction, could not provide great results at the tempo of development of combat actions which were characteristic of modern weapons. With such a strike, the main forces of the enemy, if they considered battle under the given conditions unfavorable for themselves, would always be able to evade battle and slip out from under the strike.[14]

The success of the operation is connected with the proper selection of the direction of the main strike (or two strikes in an encirclement operation), massing of forces and means on the chosen direction, and operational formation for the troops. The main strike and the maneuver of the attacking forces which proceeds from it were to be implemented on a direction which would support the arrival of a sufficiently powerful grouping of the attacking side at an area of the enemy defense in which a threat would be created of action against the operational-strategic flank and rear of his entire grouping and of disruption of his communications.

Judging by the works of Tukhachevsky and Triandafillov, the operational structure of a *front* was to consist of one echelon and a reserve. Shock armies and armies of conventional composition were deployed in the first echelon.

Shock armies were to play a leading role in the *front* operation. They were assigned to advance on the direction of the main strike (strikes). The problem of massing forces and means on the chosen direction was resolved by them. Therefore, each shock army was organized in such a way so that within the framework of the *front* operation it could conduct a series of successive operations by means of its own forces.

It was anticipated that the front of advance of a shock army would be around 50 kilometers, including a 25-km front of attack.[15] The depth of an army operation, according to the concepts of these years, could fluctuate within the limits of 25-30 kilometers up to 50 kilometers, with its duration being 5-6 days and the tempo 5-6 kilometers per day.[16]

Verification of the tenets of the theory of successive *front* offensive operations was implemented in 1928 at a command-staff game prepared by the Deputy Chief of Staff of the *RKKA*, V. K. Triandafillov. In the course of the war game an initial operation was planned and the line of the decisive operation was marked. There was no planning for a pursuit operation, inasmuch as it was considered impossible to guess in advance changes in the situation. The *front* which implemented the successive operations consisted of 4 armies. Railroad and automobile transport from the depth was given to the troops to augment forces.[17]

The theory of successive offensive operations was a progressive one for its time. However, for its successful implementation it was necessary to supply the Red Army with a sufficient quantity of combat and technical assets. The authors of *Future War* considered the following among such assets:

1. motorized rifle-machine gun units reinforced with fast-moving tanks and motorized artillery;

2. large cavalry units reinforced by armor (armored cars and fast-moving tanks) and fire assets and prepared to conduct dismounted and combined battle;

3. large air-assault units.

It was considered that without the creation of the enumerated formations with special arms and organization, modern operations would have no conditions for the decisive destruction of the enemy.[18]

The successful execution the first five-year plan, in particular the plan for military development, made it possible to significantly increase the military might of the Soviet Armed Forces. The Red Army received the

means to suppress an enemy defense and his reserves and to prevent the maneuver of forces and means to the area of the penetration. On this basis a new theory was created in the first and beginning of the second half of the 1930s (1930-1937)—the theory of deep battle and deep offensive operation, which was the highest achievement of military art of those years.

In the new theory, which was developed on a higher technological base, three types of operations (initial, pursuit, and decisive) came together into a single offensive operation, the aim of which was already not the gradual annihilation of a large enemy grouping by means of several operational efforts, but rather its complete rout in the course of a single operation. In a future war, as Triandafillov wrote, "initial and subsequent operations would combine into a single, uninterrupted, prolonged operation,"[19] i.e., successive operations extended in time and space, in which only small parts were "bitten off" the enemy grouping and destroyed, formed a new operational-strategic amalgam—a single, destructive operation which pulverized the enemy grouping on a lesser expanse and in a shorter time than was required by a series of successive operations.

Thus, the idea of a complete rout of a large enemy grouping in a single *front* operation was embodied in the 1930s in the theory of the deep offensive operation. Its primary tenets were implemented in the course of the offensive operations of *front* and army forces during the Great Patriotic War.

ENDNOTES

1. R. Savushkin, "K voprosu o zarozhdenii teorii posledovatel'nykh nastupatel'nykh operatsiy," *Voyenno-istoricheskiy zhurnal* [Military-historical journal], 5 (May, 1983) pp. 12—20.
2. M. N. Tukhachevsky, *Izbrannyye proizvedeniya* [Selected works], Vol. 1 (Moscow: 1964), p. 167.
3. Ibid. p. 142.
4. Ibid. pp. 185—197.
5. M. N. Tukhachevsky, N. Ye. Varfolomeyev, and Ye. A. Shilovsky, *Armeyskaya operatsiya. Rabota komandovaniya i polevogo upravleniya* [The army operation. Work of command and field control]. Under the editorship of M. N. Tukhachevsky (Voyenizdat, 1926).
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7. N. Movchin, *Posledovatel'nyye operatsii po opytu Marny i Visly* [Successive operations according to the experience of the Marne and the Vistula] (Moscow-Leningrad: Gosizdat, military literature section, 1928), p. 40.
8. Ibid., p. 118.
9. *TsGASA* [Central Archives of the Soviet Army], f. 33988, op. 2, d. 688, pp. 16—17.
10. V. K. Triandafillov perished in the summer of 1931 in an air crash. All subsequent editions of his book were patterned on the edition from 1929.
11. V. Triandafillov, *Kharakter operatsiy sovremennykh armiy* [The nature of the operations of modern armies] (Gosvoyenizdat: 1936, p. 149).
12. Tukhachevsky, Varfolomeyev, Shilovsky, pp. 59, 70.
13. Central Archives of the Soviet Army, f. 33988, op. 9, d. 688, p. 18.
14. Triandafillov, *Nature of the operations*, p. 205.
15. Ibid. p. 140.
16. Ibid. pp. 147—148, 288.
17. Central Archive of the Soviet Army, f. 37977, op. 3, d. 209, pp. 1—20.
18. Ibid., f. 33988, op. 2, d. 688, pp. 18—19.
19. Triandafillov, *Nature of the operations*, p. 178.

DEEP OPERATION (BATTLE)[1]

N. V. Ogarkov

Deep operation (battle) is a form of combat action of operational large formations (formations, units).[2] The theory of deep operation was developed by Soviet military science in the 1930s. Its essence consists of the simultaneous suppression of the enemy defense by destruction on the entire depth, and of the penetration of its tactical zone on a selected direction with a subsequent rapid development of tactical success into operational success by means of introducing into the engagement an echelon for developing success (tanks, motorized infantry, cavalry) and landing an air assault for the most rapid achievement of the established objective. The theory of deep operation indicated the surmounting of a positional deadlock which had been created in military art in the course of World War I. It was principally a new theory of conducting offensive actions by means of massive, technically equipped armies. This was a qualitative jump in the development of military art. It clearly revealed the dependence of the forms and methods of conducting combat actions on means of combat. Its development was conditioned by the socio-economic development of the USSR, the progressive nature of Soviet military science, the technical outfitting and reorganization of the Soviet Army, and the accumulation of combat experience.

The origin and development of the theory of deep operation is connected with the development of the theory of deep battle, the foundations of which were stated at the end of the 1920s in the works of Soviet military theorists M. N. Tukhachevsky, V. K. Triandafillov, A. I. Yegorov, and others. Foreign regulations at this time still did not examine the possibilities of simultaneously affecting the entire depth of the enemy defense for the purpose of penetrating it.

The theory of deep battle was developed in the USSR on the basis of new materiel-technological outfitting of troops (long-range artillery, tanks and armored vehicles, combat aircraft) and also in connection with the appearance of new combat arms (tank, mechanized, air assault), which made it possible to reject former methods of combat, the essence of which was the slow and gradual overcoming of each enemy defensive position, and to shift to more effective mobile forms of combat actions. The most complex stage of deep battle was considered the penetration of the defense. For its implementation it was recommended to have deep battle formations for the troops. The tenets of the theory of deep battle, developed in the beginning of the 1930s, were subjected to careful verification in numerous experimental, troop, and command-staff exercises in the Volga, Kiev, Belorussian, and other Military Districts. The result of this long and painstaking labor was first stated in *Instruktsiya po glubokomu boyu* [Instructions on deep battle]; subsequently it found fuller reflection in the combat and field regulations. The *Temporary Field Regulation Of The RKKA Of 1936 (PU-36)*, in which the basic principles of deep battle were stated, envisioned the creation of shock and holding forces, reserves, and fire (artillery) groups in the combat formation of formations *(soyedineniye)* and units (sketch 1). The shock group was designated for the offensive on the direction of the main strike. In its composition it was recommended to allot no fewer than two-thirds of all the forces and means of the unit or formation. With a significant superiority over the enemy in forces and means and with an advantageous situation for encirclement of enemy forces, the creation of two shock groups operating on converging directions was permitted. The holding force was designated for actions on the direction of the auxiliary strike and had the mission of attracting the enemy's attention and supporting the advance of the shock group. The reserve (up to one-ninth of the forces and means) was designated to resolve missions which suddenly arose in the course of battle. The penetration of the tactical zone of defense was considered completed with the arrival of the troops at a depth of 10-12 kilometers. For deep penetration into the enemy defense and an increased rate of advance, a special place was assigned to tanks, which were divided into three groups: direct infantry support, long-range infantry support, and long-range. This issue was developed in the works of V. K. Triandafillov and made concrete in the works of K. B. Kalinovsky. Infantry support artillery groups were created in divisions according to the number of rifle regiments (in corps, long-range groups were created according to the number of first echelon divisions; in individual cases artillery demolition groups were created) for more effective combat utilization of artillery, improvement of its cooperation with infantry and tanks, and improvement of control. Organic and attached antiaircraft artillery of formations were joined under the command of the senior chief in executing the overall mission.

In 1940-1941 the understanding of deep battle as "combined arms battle," the success of which was determined by surprise and decisiveness of troop actions; skillful use of movement, all types of fire, and maneuver; and solid and uninterrupted cooperation of all combat arms and special troops participating in the

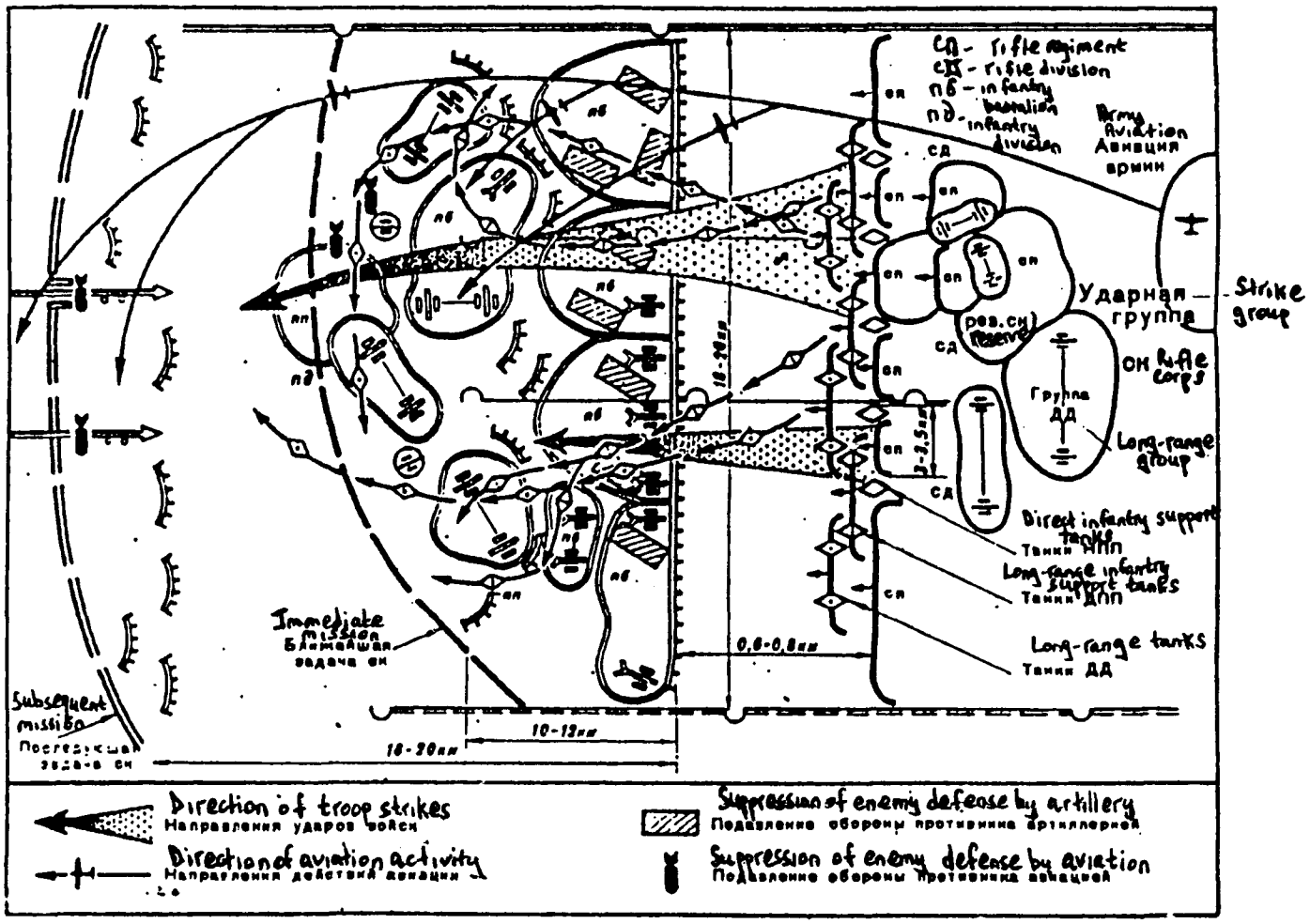


Рис. 1. Наступление стрелкового корпуса и дивизии по Полевому уставу 1936 г.

Advance of a rifle corps and division according to 1936 Field Regulations

battle or executing missions to support it was established in Soviet regulations. By this time several theoretical tenets of deep battle and tactical norms were reexamined and refined. Together with the creation of shock and holding forces, the structuring of the battle formation of divisions into two echelons and that of regiments into three echelons was envisioned. According to the plan of the *1941 Field Regulation (PU-41)*, the battle formation of combined arms formations and units in an offensive battle consisted of combat echelons, artillery groups, tank support groups, and reserves (general, tank, and antitank). In addition to the artillery groups created earlier (infantry support, long-range, artillery demolition) it was recommended to have artillery antitank and antiaircraft groups. Such a combat formation structure facilitated troop cooperation and control.

The theory of deep battle touched on a number of cardinal problems of Soviet operational art and allowed for the development of the theory of deep operation. Already in the 1930s, as a measure of the strain in the international situation, the theory of deep operation had gained increasingly important significance and became more and more current. Such well-known Soviet military leaders as M. N. Tukhachevsky, A. I. Yegorov, I. P. Uborevich, I. E. Yakir, Ya. I. Alksnis, and others focused a great deal of attention on the further development of this theory and the thorough practical verification of its tenets in military games, exercises, and troop maneuvers. In the mid-1930s the theory of deep operation was basically worked out. In Soviet military works deep operation was thought of as an operation conducted by a shock army operating on the direction of the main strike (sketch 2). To inflict a powerful first strike against the enemy and rapidly develop success, a deeply-echeloned operational force structure, including an attack echelon, echelon for developing the penetration, reserves, aviation, and air assault forces, was envisioned. The attack echelon, in whose composition was envisioned rifle corps reinforced by tanks and artillery, was designated for the penetration of

the tactical defense. The echelon for developing the penetration (a mobile group made up of several mechanized and cavalry corps) served to develop tactical success into an operational one. The introduction of the echelon for developing the penetration after breaking through the enemy's tactical depth of defense was considered most expedient. With an inadequately developed enemy defense and lack of large reserves on his part, and with the penetration of reinforced zones having permanent structures (permanent fire positions, earth-and-timber fire positions), the use of the echelon for developing the penetration to complete the breakthrough of the tactical zone together with the attack echelon was not excluded. However, this variant was considered less expedient. Methods of operation of the echelon for developing the penetration in the operational depth using decisive maneuver of forces and means were also worked out. All this increased the potential for successfully penetrating the enemy defense and developing the offensive at high tempos and at great depth, and made it possible to transfer the tenets of the theory of deep operation to offensive operations of the front. In this connection, opinions on the role of *front* and army large formations changed.

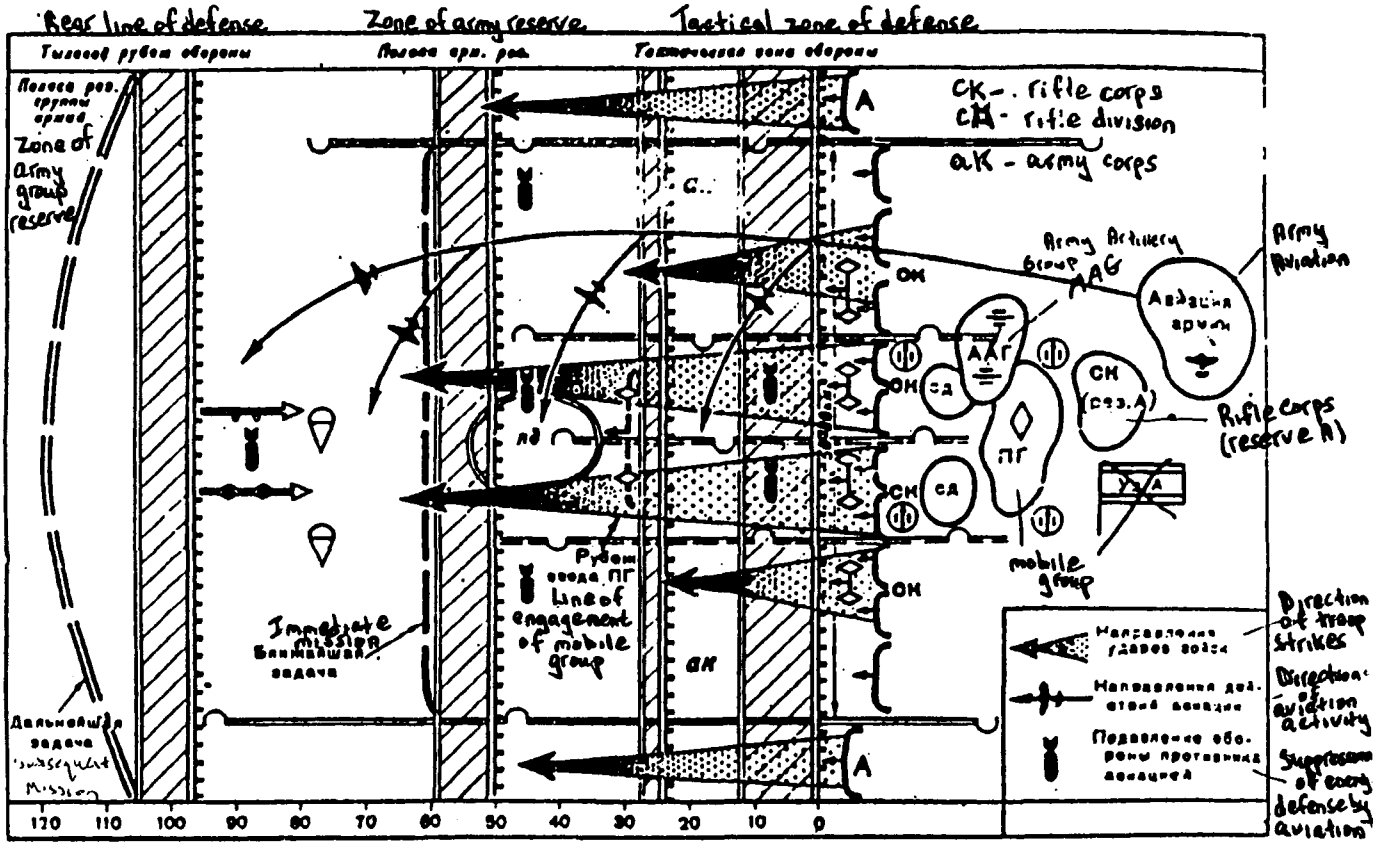


Рис. 2. Наступательная операция ударной армии по предвоенным взглядам (принципиальная схема).

Offensive operation of a shock army according to prewar opinions (principal sketch)

Not long after the beginning of the Great Patriotic War (in the 1940s), the conclusion was made that deep operations could be conducted not only by a single *front*, but also by several jointly operating *front* large formations with the participation of large aviation forces and, on maritime directions, those of the Navy. Here the *front* was viewed as an operational-strategic large formation. Army large formations were designated mainly for actions within the composition of *fronts*. The independent conduct of a deep operation by an army was acknowledged as possible only on individual operational directions or under special conditions (in mountains, deserts, etc.). For the conduct of deep operations it was considered expedient to have 3-4 shock armies and 1-2 conventional armies, 1-2 mechanized, tank or cavalry corps, and from 15 to 30 aviation divisions in the composition of a *front*. It was suggested that with such a composition the *front* could conduct an offensive in a zone of up to 300-400 kilometers and to a depth of up to 200-300 kilometers, inflicting the main strike on a sector of 60-100 kilometers where the following density was created: 1 division per 2-2.5 kilometers, 50-100 guns, and 50-100 tanks per kilometer of front (sketch 3). The duration of the operation could, according to opinions at that time, reach 15-20 days with an average daily rate of advance of 10-15 kilometers for infantry and 40-50 kilometers for mobile forces. The creation of a strong operational first

echelon (from combined arms armies), a mobile group (from tank, mechanized, and cavalry formations), an aviation group and reserves was envisioned for the *front*. The army which was advancing on the direction of the main strike of the *front* (shock army) could have in its composition 3-5 rifle corps, 1-2 mechanized corps/cavalry corps, 7-9 artillery regiments, and 7-8 antiaircraft artillery battalions, while its actions were supported by 2-3 aviation divisions. It was considered that with such a composition the army was capable of penetrating the enemy defense on a sector of 20-30 kilometers and advancing in a zone with a width of 50-80 kilometers to a depth of 70-100 kilometers. It was suggested to use the army mobile group to complete the penetration of the enemy's tactical zone of defense or to introduce it into battle after the penetration of the second zone of defense for the purpose of developing success. Great significance in the theory of deep operation was attached to the organization of the Air Defense, implemented by forces of fighter aviation and antiaircraft assets.

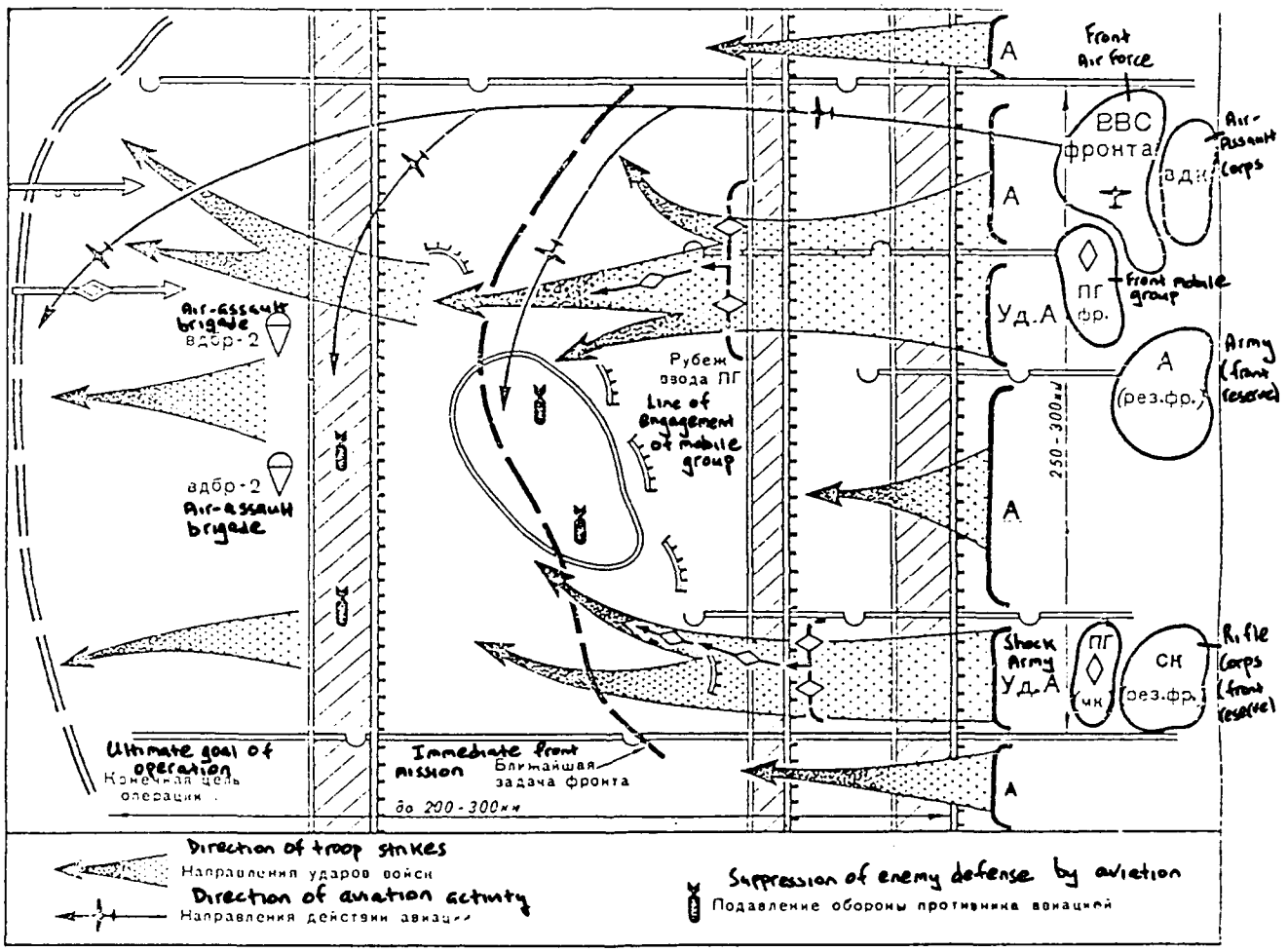


Рис. 3. Наступательная операция фронта по предвоенным взглядам (принципиальная схема).
Offensive front operation according to prewar views (principal sketch)

The theory of deep operation (battle) developed by Soviet military science received rapid acceptance and dissemination in Soviet military academies, among the troops, and in staffs. The correctness of its basic tenets was confirmed in maneuvers of troops of the Kiev (1935), Belorussian, Moscow, Odessa (1936) and other Military Districts, as well as in combat actions at Lake Khasan (1938), at Khalkhin-Gol (1939), and in the course of the Soviet-Finnish military conflict (1939-1940). The necessity of mass utilization of forces and means on decisive directions, the expediency of creating echelons for the development of success, the importance of close cooperation of all combat arms, and the increasing role of artillery, tanks, and aviation were absolutely demonstrated.

The development of the theory of deep operation (battle) on the eve of World War II was very useful and necessary for the Soviet Army. The viability of its basic tenets was clearly manifested in the offensive operations and battles of the Great Patriotic War. In the course of the war this theory was continuously improved in accordance with outfitting Soviet forces with increasingly more effective equipment and

armaments and the change of their organizational structure and the nature of the enemy defense. Problems of the penetration of a powerful, deeply echeloned enemy defense were resolved successfully. The penetration was implemented by a *front* on one or several sectors, with its subsequent development into the depth or on the flanks, as well as on converging directions for the purpose of encircling and destroying large enemy groupings. The tempo of the penetration sharply increased. In a number of operations (Yassy-Kishinev, Vistula-Oder, and others), this amounted to 20-30 kilometers and more per day. By the end of the war, the depth of an offensive operation had significantly increased and reached 100-180 kilometers in army operations, and 400-600 kilometers in *front* operations. Here, on narrow penetration sectors which comprised 7-12% of the width of the offensive zone of the *fronts* and armies, often up to 70-80% of artillery and up to 100% of the tanks and self-propelled artillery pieces were concentrated. Operational force structures and combat formations changed, depending on the conditions. Thus, in 1942 when the enemy was still not using a deeply echeloned defense, single-echelon combat formations were introduced at all levels—from rifle platoon to rifle division (Order #306 of the Peoples Commissariat for Defense). Such a structure of combat formations provided for inflicting a strong preliminary strike and was expedient in the penetration of a shallow defense. When the enemy went over to the structure of a deeply echeloned positional defense (1943), a decision was made to shift to a more deeply echeloned combat formation of rifle corps, divisions, and regiments. In the artillery the regimental, division, and corps artillery groups (in the army—army artillery groups) were finally approved. Artillery actions in the penetration of the enemy defense included conducting powerful artillery preparation, support of the attack, and accompaniment during the battle in the depth. The density of artillery increased, and beginning in 1943 in individual operations on sectors it reached 200-250, and sometimes even 320 guns and mortars per kilometer of front. The density of tanks and self-propelled artillery pieces in the offensive operations of 1944-1945 were 75-80 and more per kilometer. The methods of combat utilization of aviation also changed significantly. With this the destruction of the enemy at a significant depth and uninterrupted fire support of the advancing troops were achieved. Second echelons, strong mobile groups, and reserves from all combat arms were created in *fronts* and armies to develop success. Mobile groups were designated to develop offensive operations to a great depth at a high tempo. In *fronts* they consisted of 1-2 tank armies and in armies of 1-2 tank/mechanized corps. Cavalry-mechanized and cavalry-tank groups consisting, as a rule, of a mechanized (tank) corps and a cavalry corps under a single command were also used for these same purposes. With an insufficient number of direct infantry support tanks, they were sometimes introduced (especially army mobile groups) to complete the penetration of the enemy's tactical defense. In conducting operations, great success was achieved in the art of encircling large enemy groupings by the forces of one or several interacting *fronts*. The art of liquidating encircled groupings by means of cutting them off into units during the encirclement and their subsequent annihilation (Vitebsk-Orsha, Bobruysk, East Prussia Offensive Operations, and others) received further development.

In the postwar period, the fundamental principles of the theory of deep operation (battle) continued to develop on a higher technical foundation. Fundamentally new types of military equipment and weapons with great destructive force were created. Together with nuclear weapons, the Armed Forces were outfitted with the most modern types of conventional means of destruction. The complete mechanization and motorization of ground forces formations and large formations were implemented, and their mobility, strike force, and fire power increased. A qualitative jump occurred in the development of all branches of the Armed Forces. All this significantly increased the possibility for simultaneously acting on the entire depth of the enemy structure, penetrating his defense at high tempos, and swiftly developing success. In comparison with the period of the Great Patriotic War, the methods of organizing and conducting an operation and battle changed substantially. The term "deep operation (battle)" has not been used since the 1960s in official documents; however, the general principles of this theory have not lost their significance even at the present time.

ENDNOTES

1. *Sovetskaya voyennaya entsiklopediya* [Soviet military encyclopedia], sv "Glubokaya operatsiya (boy)," Volume 2, 1976, pp. 574—578.
2. Translator's note: for the sake of consistency, the Russian terms *ob"yedineniye*, *soyedineniye*, and *chast'* will be translated as "large formation," "formation," and "unit" respectively.

   The Russian terms *soyedineniye* and *ob"yedineniye* are usually both translated as "formation," with the American understanding to be a difference in size: *soyedineniye*— division, corps, brigade; *ob"yedineniye* —army, *front*. The 1986 edition of the *Military Encyclopedia Dictionary* [Moscow: Voyenizdat, 1986] gives the following definitions:

   soyedineniye—a military formation consisting of several units or a number of lower level *soyedineniye*, usually of various combat arms (forces), special troops (services) and support and maintenance units (subunits). There are formations of both permanent and temporary organization. Formations are defined as operational, operational-tactical, and tactical, dependent on the composition and

missions being resolved. The aircraft carrier strike formation in the US Navy is considered an operational formation; army, rifle, mechanized, tank, cavalry, and other corps in World War II, and sometimes squadrons of surface ships were considered operational-tactical formations; divisions, brigades, etc. are considered tactical formationa;

ob"yedineniye—a military formation made up of several *soyedineniye* or lower level *ob"yedineniye*, as well as units and installations. The *ob"yedineniye* may be strategic, operational-strategic, operational, or operational-tactical, dependent on the composition and missions being resolved. The *ob"yedineniye* may also be territorial combined arms.

THE DEVELOPMENT OF THE THEORY OF DEEP OFFENSIVE BATTLE IN THE PREWAR YEARS[1]

Colonel V. I. Ul'yanov

After the Civil War and intervention, the Soviet republic acquired the ability to develop its peaceful construction. Under the leadership of the Communist Party, our nation created a powerful industry and implemented both the collectivization of agriculture and the cultural revolution. The Communist Party developed a military policy and determined the direction and tasks of military development. Together with an improvement in the organization of the Red Army and Navy, their technical rearmament, and the training and indoctrination of command cadres, Soviet military science also developed. In synthesizing the best from the military legacy of the past and the combat experience in defending the country of socialism, and enriched by new theoretical postulates, military science outstripped existing theories of armies of capitalist countries in many issues on the conduct of battle. In its development, three points were taken into consideration. First, the theory of group tactics which responded to the conditions of the 1920s, did not correspond to the requirements of a future war. Consequently, there arose the necessity of developing a fundamentally new theory of conducting battle and searching for such methods and means of combat operations which would make it possible to successfully overcome the strong curtain of fire of a continuous enemy front, and to inflict a strike against his shock groupings in a short period of time.

Second, technical means of combat had increased qualitatively and quantitatively, and mobile formations were being created. Our prewar regulations viewed the infantry as the main combat arm, since it bore the primary weight of battle and was able to provide for seizure of and an extended hold on the terrain. Here, however, other combat arms, including aviation, had to support the infantry. These views were an objective prerequisite for resolving problems of the offensive battle in a new way. Third, Soviet military science, in following defensive doctrine, proceeded from the idea of a retaliatory strike against the enemy. This idea arose from the very essence of the socialist system, from the politics of the Soviet State, vitally interested in the maintenance of peace and not intending to attack anyone.

A great achievement of Soviet military science was the theory of deep operation, in accordance with which the theory of deep offensive battle was developed. Taking into account the development of technical means of combat, at the base of this theory's tenets lay the issues of increasing maneuverability, the strike force of troops, and their combat capabilities.

The theory of deep offensive battle arose from the fact that battle became a combined arms matter and its aim could be achieved on the basis of cooperation of all combat arms by means of decisive offensive operations, which were to be brought to a conclusion by encirclement and annihilation of the enemy. It also took into consideration the circumstance that rifle units and formations acquired a large quantity of light machine guns, company, battalion, and regimental mortars, and antitank, antiaircraft, and field artillery guns. For example, the overall number of machine guns in rifle formations from 1930-1939 increased 5.5 times. Here there appeared a tendency for growth in the fire capabilities of rifle divisions (see table 1).

The basic tenets of the theory of deep battle were formulated in *Instruktsiya po glubokomu boyu* [Instructions for deep battle], which appeared in 1935, and in the *Field Regulation for the Workers' and Peasants' Red Army [PU-36]*. The essence of the theory of deep offensive battle consisted of simultaneously striking the enemy's battle formation "through the entire depth of his deployment" (p.9). This was achieved by means of aviation strikes and artillery fire, swift penetration of long-range tank groups into the area of deployment of enemy artillery and tactical reserves, decisive forward advance of long-range infantry support tanks, uninterrupted advance of infantry with direct support tanks, and dynamic air assault operations.

The development of the theory of deep offensive operation has its own history.

This idea was advanced for the first time in 1928 by M. N. Tukhachevsky. He indicated that the new materiel-technical base of the army (long-range artillery, tanks, aviation, *desants*) made it possible to reject the previous exhausting forms of combat for each enemy position individually, and arrive at new, more effective forms and means of conducting battle.[2] It is proper to note that other Soviet military scholars were occupied with the development of the theory of deep offensive operation. An important role in the development of new tactical principles was played by the efforts of M. V. Frunze, A. I. Verkhovsky, N. Ye. Kapurin, Ye. K. Smyslovsky, and many others.

Таблица 1

1 Сравнительная таблица огневых возможностей стрелковой дивизии

2 По штату дивизии	3 Колич. ружейно-пулем. выстрелов в минуту	4 Вес одного мин. залпа, кг	5 Вес одного арт. залпа, кг	6 Общий вес одного арт.-мин. залпа, кг
1923 г.	89 820	—	336,0	336,0
1924 г.	96 430	—	522,0	522,0
1929 г.	128 910	—	578,4	578,4
1931 г.	141 550	—	584,6	584,6
1935 г.	160 910	55,8	1026,8	1082,6
1939 г.	200 950	375,3	1326,0	1701,3
1940 г.	353 120	433,8	1388,4	1822,2

Таблица 2

1 Сравнительная характеристика стрелковых дивизий по штатам мирного и военного времени

2 Тип стрелковой дивизии	3 Личный состав	4 Автомашины	5 Лошади	6 Вооружение				11 Орудия			
				7 винтовки и карабины	8 пулеметы станковые	9 пулеметы ручные	10 автоматы	12 малого калибра	13 среднего калибра	14 тяжелого калибра	15 минометы
16 12-тыс. состава	10 291	414	1 955	7 818	164	371	1 159	62	70	12	150
17 6-тыс. состава	5 864	155	905	3 685	163	324	691	52	62	12	108
18 Горно-стрелковые	8 829	203	3 160	6 960	110	314	788	8	56	—	120
19 По штату военного времени	14 483	558	3 039	10 420	166	392	1 204	54	66	12	150

The theory of deep battle was continually verified. Its individual tenets were refined on the basis of the experience of exercises and maneuvers conducted in military districts, and of battles in the area of Lake Khasan, at the Khalkhin-Gol River, on the Karelian Isthmus, and in the initial period of World War II. Thus, the idea of the possibility of a simultaneous strike against the enemy over the entire tactical depth, having three tank groups (direct infantry support, long-range infantry support, and long-range) in cooperation with long-range artillery and aviation, was made concrete by V. K. Triandafillov. K. B. Kalinovsky developed the tactics of the actions of these groups.

The theory of deep operation envisioned the solution of the first problem, i.e., the penetration of the enemy defense, as being implemented by rifle formations reinforced with tanks and artillery engaged in the first operational echelon of the army. It was envisioned to achieve the development of tactical success into operational success by means of swift operations of mobile and air assault troops and aviation strikes. These principles were also included in the theory of deep offensive battle.

At that time, a rifle corps which, depending on the situation, could operate in one of the combat echelons of the operational formation of an army on the main or auxiliary direction, or be located in the *front* reserve, was a higher tactical formation. Operating in the first combat echelon, a rifle corps consisting of three rifle divisions, two artillery regiments, separate antiaircraft battalion, engineer battalion, and communications battalion was to resolve the primary missions of penetrating the entire enemy tactical zone of defense and creating conditions for the development of success.

As for the rifle division, from September 1939 through April 1941 its organization for combat changed three times. A division outfitted according to the new table of organization was capable of firing 96.5 thousand rifle and machine gun rounds more than a division with the 1939 tables of organization. This speaks to the fact that its armaments to the greatest degree began to respond to the missions which it could be assigned in an offensive battle. It became the primary tactical formation. In the prewar years rifle divisions existed with a complement of 12,000 and 6,000. The difference between them, insubstantial in truth, existed in armaments, including guns of various calibers. The mountain-rifle divisions which existed at that time were significantly behind rifle divisions in personnel and armaments (see table 2). However, according to the organization for combat these and other divisions consisted of three rifle and two artillery regiments, one antitank and one antiaircraft artillery battalion, an engineer battalion, communications battalion, and support and maintenance subunits.[3]

It was envisioned to use the corps and division offensive against the following types of enemy: one which had prepared in advance a positional defense under field conditions or in fortified regions; one which had quickly gone over to the defense; one which was using a mobile defense. The offensive commenced under conditions with or without direct contact with the enemy. Depending on this, the methods of carrying out the combat missions and the structure of the combat formations, for which there were concrete requirements, were determined. In particular, combat formations were to provide for inflicting a decisive defeat against the enemy on a selected direction of the main strike; better use of all means of combat and cooperation of all combat arms for achieving the assigned goals; flexibility and control, providing, to the degree necessary, the ability to change the structure of the formation; and the capability of repelling enemy counterattacks.

Proceeding from these requirements, the *Vremennyy polevoy ustav RKKA* [Temporary field regulation of the Workers' and Peasants' Red Army] of 1936 recommended the creation of combat formations in the offensive from shock and holding groups and from the reserve.

A shock group was designated for an advance on the direction of the main strike. It consisted of two-thirds of the forces, the basis of which were fire assets which were organic and attached to the formation. The main criterion for a sufficiency of infantry within a group was the ability to conclusively annihilate the enemy on the entire depth of his deployment in cooperation with tanks, artillery, and aviation. Here, extreme oversaturation with infantry was avoided, since this entailed losses which in no way were justified. The width of the front of a shock group was determined as dependent on the forces and means at hand, the nature of the terrain, the degree of enemy engineer defensive preparation, its stability, and the systems and strengths of enemy fire. Thus, a division shock group consisting of no fewer than two rifle regiments reinforced by tanks and supported by the primary mass of division and attached artillery could implement an offensive in a zone of 3-3.5 kilometers.[4]

A holding group was designated for operations on a secondary direction. Its composition included organic forces and means. It was assigned the mission of pinning down the enemy by means of dynamic actions and not allowing him to regroup his forces for operations against the shock group.

However, the experience of the Soviet-Finnish War demonstrated that the creation of holding groups doomed these troops to passive activities. Therefore, on the eve of the Great Patriotic War it was acknowledged as inexpedient to divide the battle formations into shock and holding groups. According to the plan of the 1941 *Field Regulation*, the combat formation of rifle formations and units in the offensive was subdivided into combat echelons artillery groups, infantry support tank groups, and reserves (general, tank, and antitank).[5]

The recommendations of the prewar years concerning the structure of the combat formation did not, in full measure, reflect the essence of deep offensive battle. In particular, a deeply echeloned structure of formations, units, and even subunits was envisioned. As a result of such echeloning, a significant portion of the division's forces and means did not participate in the battle. Later on, these views were reexamined, and second echelons began to receive active missions and provide support for the first echelon by means of fire of all available assets.

The combat formation of a rifle regiment included two echelons (in a strike group, battalion behind battalion) or three (battalion behind battalion); the division shock group included two echelons (regiment behind regiment) or one echelon (regiments on line). The combat formation of a rifle corps in the offensive was usually structured in one echelon (divisions on line). Such a structure was explained by the significant depth of the division combat formations and convenience of control. It was envisioned to augment the force and increase the depth of the corps strike using operational reserves. In all instances, it was envisioned to support the first echelons of the attacking forces by all fire assets of subsequent echelons and, above all, by artillery. The chief purpose of the second echelons was not to replace the first, as in the past, but to augment the force of the strike for the purpose of developing the offensive into the depth.

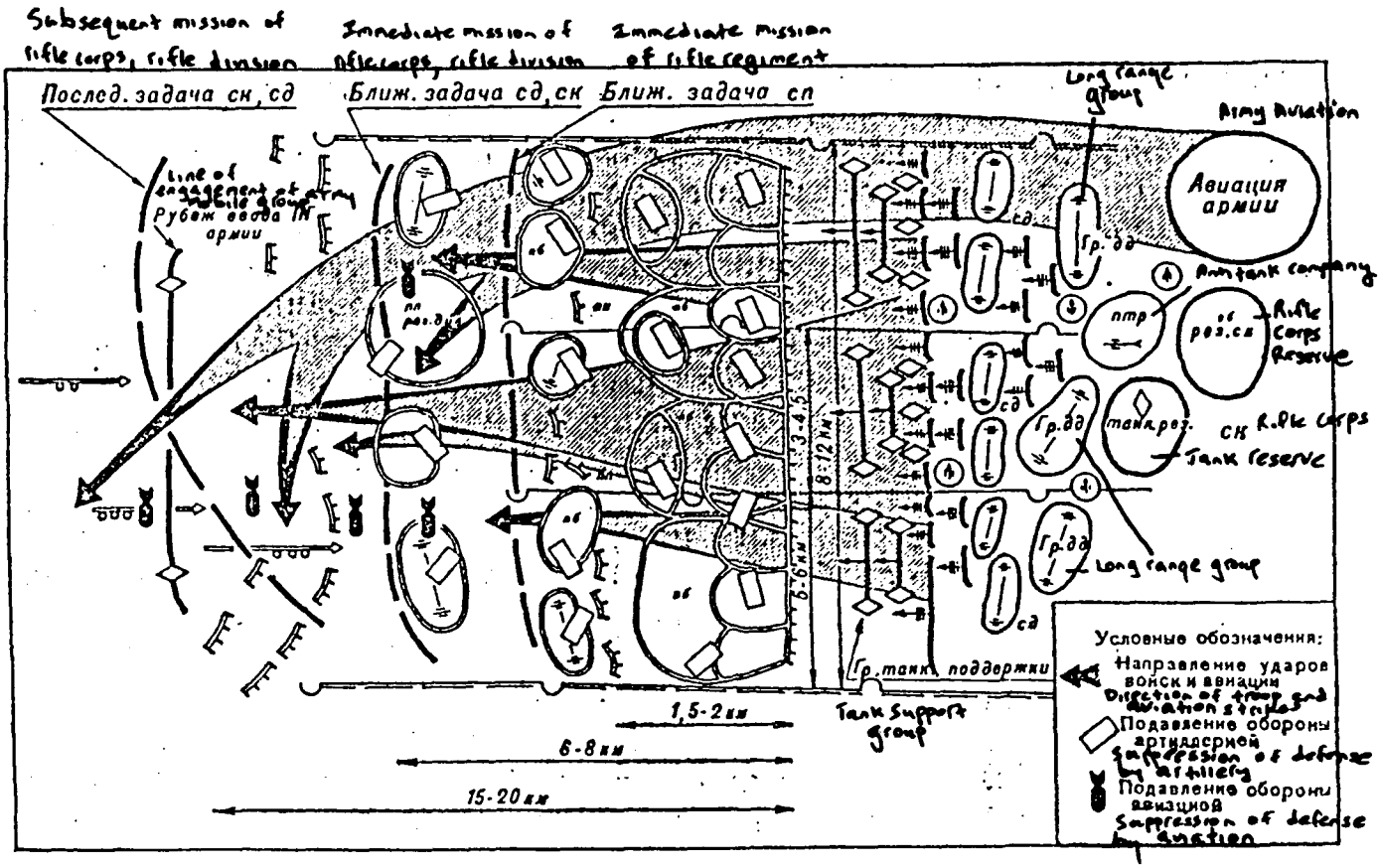
It is necessary to keep in mind that it was envisioned to divide parts of the forces into reserves (combined arms and antitank), independent of the echelonment depth of the division (regimental) combat formation, in case of unexpected events, which could arise in the course of the offensive battle, to reinforce the antitank assets of the combat formations, and to move forward swiftly in the development of the success of the offensive.

The regulations and instructions in operation in the prewar years did not define the depth of the zone of the offensive. However, as practical experience demonstrated, a rifle corps advancing in the first echelon of an army and on the direction of the main strike could receive a zone with a width of 18-20 kilometers. A rifle division reinforced by tanks and artillery advanced in a zone of 5-7 kilometers. However, under the influence of the experience of battles at Khalkhin-Gol River and in Finland in 1940-1941, and also as a result of the increasing fire power of the enemy defense, the width of the zone of the offensive was reduced and amounted to the following: for a rifle corps—8-12 kilometers; for a division—3-4 kilometers on the main direction, and 5-6 kilometers on a secondary direction. The depth of the corps mission was increased from 10-12 to 20 kilometers (see sketch).

A rifle division advancing in a zone of 3 kilometers could create the following average tactical densities per kilometer of front: 3 rifle battalions, 401 guns/machine guns, 97 light machine guns, 55 heavy machine guns, 22 mortars, 8 antitank guns, and 26 artillery guns.

Thus, division capabilities in creating the indicated densities of forces and means, with cooperation of infantry with artillery, tanks, and aviation, provided for a penetration of the enemy defense and his simultaneous destruction through the entire tactical depth of the defense.

The combat mission of a rifle corps and division was subdivided into immediate and subsequent. In connection with the fact that a rifle corps structured its combat formation, as a rule, in one echelon, the depth of its combat mission coincided with the depth of the missions of rifle divisions advancing on the main direction. The immediate mission of the division consisted of seizing the main zone of the enemy defense (6-8 kilometers), while the subsequent mission consisted of developing success and seizing the second defensive zone. For regiments the immediate mission was the capture of regimental reserve positions and areas of the primary artillery fire positions (3-4 kilometers), while the subsequent mission was seizing division reserve positions.



Наступление стрелкового корпуса и дивизии по предвоенным взглядам
Offensive of a rifle corps and division according to prewar views

In accordance with the theory of deep offensive battle, the immediate mission was to be resolved, as a rule, in the initial structure of the combat formation, the second zone of defense was to be penetrated and captured from the march, and the penetration of the entire tactical depth of the enemy defense by corps was to take place on the first day of the operation, i.e., in the course of 10-12 hours of battle. Here, penetration was considered accomplished when the infantry overcame the entire depth of the enemy's antipersonnel and antitank defenses, his artillery was captured or at least fully suppressed, and counterattacks of tactical reserves were repelled.

In selecting the direction of the main strike, terrain conditions and enemy forces, especially that portion of the grouping, the rout of which would provide for the successful conduct of the assigned mission, were taken into account. The main strike was delivered on a specific sector of the front where the greater portion of forces and means for suppressing corps and divisions were concentrated. The infantry was the foundation of the combat echelons of the advancing forces. By means of decisive operations, in the presence of support from other combat arms, it was to resolve the outcome of the battle. The infantry commenced its advance from an initial line located no more than 300 meters from the forward edge of the enemy defense, and went over to the attack when the first echelon of tanks arrived at the forward edge of the defense, and the artillery transferred fire into the depth. The attack was to commence simultaneously over the entire zone of the rifle corps, and was to be conducted uninterruptedly day and night.[6] For the organization of uninterrupted support of infantry and

tanks by means of artillery fire, forward artillery observers were moved into company and battalion combat formations.

The first combat echelon of a rifle division was designated for overcoming the main defensive zone. The second echelon was engaged to augment the force of the strike and develop success. Forward detachments were assigned to implement the pursuit of a withdrawing enemy. The plan of the 1941 *Field Regulation* envisioned the implementation of the penetration of the defense by mechanized formations, the primary action of which was the tank attack. Behind the tanks advanced the motorized infantry, which purged the penetration zone of remnants of the enemy, reinforced captured objectives, widened the penetration, and supported the flanks and rear of the tank formations. Tanks were the strike means for penetrating the defense. Interacting with artillery and aviation, they destroyed fire assets, disrupted the system of fire of the defenders, and laid a path for the attacking infantry through the entire depth of the penetration of the enemy's tactical defense. Special tank support guns, the mission of which was to fight against antitank guns, were allotted for support. Two types of tank groups were created: long-range and infantry support. After a short artillery preparation, the long-range tank group penetrated into the area of deployment of enemy division reserves and artillery and annihilated them; then infantry support tanks went over to the attack, leading the infantry behind them.

After exercises which were conducted, and taking into account the experience of the Soviet-Finnish War, long-range groups were abolished, and they no longer were envisioned in the plan for the 1941 *Field Regulation*. It was prescribed to structure the combat formation of tanks (infantry support) in three echelons. The first echelon, consisting of heavy tanks, was designated to suppress the antitank defense and destroy artillery. The second echelon consisted of medium tanks. It advanced behind the first echelon, suppressing and destroying heavy machine guns and antitank guns in the depth of the defense. The third echelon, made up of light tanks, led the infantry behind it and suppressed enemy personnel and fire assets.

First-echelon tanks attacked the forward edge while the infantry was preparing for a rush and the artillery was shifting fire from the forward edge into the depth. In an offensive against an enemy deployed behind large natural barriers or powerful antitank obstacles, tanks advanced after the penetration of the forward edge of the defense by infantry, artillery, and aviation.

However, these new tenets did not become guiding ones for all command personnel, and in the first year of the war they were basically guided by the articles of *PU-36* and the plan of *PU-39*. The main reasons for this were the lack of substantial exactingness for command preparation and the incompleteness of combat preparation methodology. The actual level of combat preparation of our Armed Forces on the eve of the war did not in full measure correspond to the requirements of the situation.

In the theory of deep battle, artillery was assigned an important role. Possessing great force and firepower, it was designated to suppress and annihilate personnel and equipment and to destroy engineer fortifications.

Artillery groups were subdivided into infantry support groups, long-range groups, destruction groups, and antiaircraft artillery groups. The first three prepared and supported the attack and further advance of infantry and tanks on the entire depth of the enemy defense, while the antiaircraft artillery group protected the combat formation against aviation raids. Artillery support of the offensive battle was planned through the entire depth of the penetration of the main zone of the enemy defense and included artillery preparation, artillery support of the attack, and artillery accompaniment of the battle in the depth.

Artillery preparation had the goal of disrupting the enemy's system of fire, suppressing his artillery, destroying detected antitank guns, etc. It was conducted in daylight, and sometimes at night, in which case it ended at dawn. The presence of forces and means, the time necessary to complete the mission, and other factors determined its duration. Sometimes a period of destruction before the commencement of the artillery preparation was envisioned to destroy a strongly-fortified defense. Its duration was 1.5 hours and more; the period of destruction could begin several days before the offensive. The artillery preparation of the attack was concluded by a fire raid along the forward edge.

Artillery support of the attack pursued the goal of preventing the enemy from reestablishing the disrupted system of fire and supporting the rush of the infantry and tanks into the attack for the seizure of the forward edge and development of the battle in the depth. Artillery support was implemented by means of a fire barrage or successive concentration of fire against the most important defensive objects; these were also used in the following way: the fire barrage was used at a depth of 1.5-2 kilometers, while successive concentration of fire

was used at greater depths. The development of these methods was an important achievement in the development of artillery tactics.

Aviation activity was planned massively in accordance with the theory of deep battle, and in close cooperation with infantry, tanks, and air assaults. Aviation support of a rifle corps and division consisted of aviation preparation and aviation support of the attack and battle in the depth. Aviation preparation was conducted in the period preceding the artillery preparation. However, if it was conducted simultaneously, then it was coordinated with respect to time with the artillery preparation. In the period of support, aviation prevented enemy counterattacks, did not allow the approach of reserves, and hindered withdrawal and occupation of the second defensive zone.

One of the most important conditions for achieving success in battle was the organization of cooperation among the combat arms. The primary mission of cooperation was the coordination of efforts and actions of all combat arms, aviation, and special forces with respect to goal, time, and place.

The organization of cooperation was implemented by the combined arms commander, who conducted all the basic work on the terrain, enlisting all commanders of subunits, units, and formations operating respectively in the zones of the rifle corps, division, and regiment. Here, the actions of artillery and aviation for supporting the infantry and tanks in the rush into the attack, seizure of the forward edge, and advance in the depth of the defense were coordinated. Thus, from the commencement of the attack, artillery was to conduct fire against detected antitank guns and areas of their presumed location. At this time, tanks under cover of artillery fire suppressed enemy machine guns and artillery; the infantry, following behind the tanks, was to attack centers of enemy resistance and by means of their own fire assets assist the tanks. At the same time, aviation, by means of powerful strikes, suppressed fire assets and accumulations of troops, accompanying infantry and tanks on the entire depth of the offensive.

Control of the battle was implemented by corps and division commanders from command positions located on the direction of the main strike. A command position consisted of the commander's observation point, when necessary an additional observation point, operational group, and communications center. For better organization of cooperation, joint location of the command positions of the combined arms commanders and the commanders of supporting subunits and units was recommended.

Thus, the theory of deep operational battle was developed on the foundation of the military-technological base of the Soviet Armed Forces created in the prewar years, taking into account the achievements of Soviet military science and the experience of the first period of World War II. Conclusions were made which refined and developed individual issues. However, far from all recommendations developed by Soviet military science succeeded in being carried out, for the Soviet government did not have at its disposal the appropriate materiel to implement its conclusions. The economy of the country did not, in full measure, provide for outfitting the Armed Forces with that quantity of the newest weapons and combat equipment which was required in accordance with the conclusions of military theory. There were other, including subjective, reasons connected with the events of 1937-1938. On the whole, the theory of deep battle was a fundamentally new theory which reflected the qualitative changes which had taken place in the development and technical equipping of the troops. Its basic tenets were progressive and responded to the spirit of the requirements of the approaching war. They guided the troops and staffs in combat preparation, and then in combat practice until 1943. For the most part they have maintained their significance even under modern conditions.

Key To Tables

Table 1:

1. Comparative table of fire capabilities of a rifle division
2. According to division equipment table
3. Number of rifle-machine gun shots per minute
4. Weight of one mortar salvo, kilograms
5. Weight of one artillery salvo, kilograms
6. Overall weight of one artillery-mortar salvo, kilograms

Table 2:

1. Comparative characteristics of rifle divisions according to peacetime and wartime equipment tables
2. Type of rifle division
3. Personnel
4. Motor vehicles
5. Horses
6. Armaments
7. Rifles and carbines
8. Heavy machine guns
9. Light machine guns
10. Automatic weapons
11. Guns
12. Small-caliber
13. Medium-caliber
14. Heavy-caliber
15. Mortars
16. 12 thousand men
17. 6 thousand men
18. Mountain-rifle division
19. According to peacetime equipment tables

ENDNOTES

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2. *Taktika* [Tactics] (Moscow: Voyenizdat, 1966), p.18.
3. *Istoriya vtoroy mirovoy voyny 1939-1945* [History of World War II 1939-1945], Volume 3 (Moscow: Voyenizdat, 1975), p. 419.
4. *Vremennyy Polevoy ustav RKKA 1936 g. (PU-36)* [Temporary field regulation of the Workers' and Peasants' Red Army 1936 (PU-36)] (Moscow: Gosvoyenizdat, 1937), p. 102.
5. *Istoriya voyn i voyennogo iskusstva* [History of wars and military art] (Moscow: Voyenizdat, 1970), pp. 110—111.
6. *Voprosy taktiki v sovetskikh voyennykh trudakh* [Problems of tactics in Soviet military works] (Moscow: Voyenizdat, 1970), p.94.