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CENTRAL INTELLIGENCE AGENCY
WASHINGTON, D.C. 20505

11 April 1977

[redacted]

MEMORANDUM FOR: The Director of Central Intelligence

FROM : William W. Wells
Deputy Director for Operations

SUBJECT : MILITARY THOUGHT (USSR): Research War Games

1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". This article assesses the procedure by which two research war games were conducted in the General Staff Academy in the years 1963 to 1965, and draws conclusions from this experience for application in future games. In the games the study of questions being researched was concentrated in the academy departments, each representing an appropriate staff or directorate, making it possible for teaching personnel to act both as players and researchers. This article appeared in Issue No. 2 (78) for 1966. [redacted]

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

[redacted]

William W. Wells

[redacted]

Page 1 of 9 Pages

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[redacted]

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[redacted]

Intelligence Information Special Report

COUNTRY USSR

DATE OF INFO. Mid-1966

DATE 11 April 1977

SUBJECT

MILITARY THOUGHT (USSR): Research War Games

SOURCE Documentary

Summary:

The following report is a translation from Russian of an article which appeared in Issue No. 2 (78) for 1966 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". The author of this article is General-Leytenant G. Semenov. This article assesses the procedure by which two research war games were conducted in the General Staff Academy in the years 1963 to 1965, and draws conclusions from this experience for application in future games. In the games the study of questions being researched was concentrated in the academy departments, each representing an appropriate staff or directorate, making it possible for teaching personnel to act both as players and researchers.

End of Summary

[redacted] Comment:

General-Leytenant Georgiy Gavrilovich Semenov was identified as Chief of Staff of the Baltic Military District between about November 1962 and March 1966. The SECRET version of Military Thought was published three times annually and was distributed down to the level of division commander. It reportedly ceased publication at the end of 1970. [redacted]

[redacted]

[redacted]

Research War Games
by
General-Leytenant G. Semenov

One of the forms of scientific work which makes possible the most thorough research into large-scale theoretical problems of operational art and strategy is the research war game.

In the years 1963 to 1965, two such games were conducted in the General Staff Academy.

The first was on the theme "Preparation and conduct of a front offensive operation and a fleet action in the initial period of a war, with and without the employment of nuclear weapons".

For greater purposefulness in researching the thematic questions assigned, the game was conducted in two stages. In the first, which lasted over six months, the preparation and conduct of a front offensive operation employing nuclear weapons were worked out. In the second stage, which lasted two months, the preparation and conduct of an operation employing only conventional means of destruction were studied, but with consideration of the constant threat of nuclear strikes by the enemy and consequently also of the possible going over to the employment of nuclear weapons by front troops and fleet forces.

The second war game was devoted to researching questions of preparing and conducting a strategic operation in a theater of military operations through the joint efforts of all branches of the armed forces, both with the employment of nuclear weapons and with the employment of only conventional means of destruction. It was carried on for seven months.

A special place in this game was allotted to planning our own initial nuclear strike, organizing the repulse of an analogous enemy strike, showing the effectiveness of the strikes, determining the possible conditions and methods for going over to the employment of nuclear weapons during the conduct of combat actions with conventional means, and organizing the moving forward of a reserve front from the interior of the country and its commitment to battle. Simultaneously, research was done on methods of preparing and conducting operations of fronts (of a fleet) and

combat actions of the air defense forces, and methods of employment of long range aviation and large airborne landing forces in a strategic operation.

It is well known that, according to established practice, new questions are usually studied and generalized at war games by groups especially created for this purpose and comprised of, depending on the nature of the problems being researched, representatives from the branch arms and branches of the armed forces. As a result, the direct participants in the game (the trainees) naturally devote their main attention to fulfilling their functional responsibilities, and less attention to the questions being researched. The researchers in their turn, having a specific task, sometimes hamper the work of the trainees; and since they are located separately from the trainees, they cannot have a good knowledge of the situation and the decisions adopted, which reflects on the thoroughness and quality of their research.

Taking this into account, in the games which were conducted the study of all questions on both themes was concentrated in academy departments, and this made it possible for the professors and instructors: to act both as players and as researchers; to tie in their participation in the war game more closely with their teaching work and thus to more fully check the existing principles in the theory of preparing and conducting modern offensive operations and to determine new principles; and to work out scientifically reasoned conclusions and recommendations on the questions being researched.

In order to attain these goals, each academy department represented an appropriate staff (directorate); it then undertook the researching of a certain set of questions, which were actually dealt with by the given organ of control during the game in conformity with the developing situation.

The working out of a decision, the assigning of tasks to the troops, the organizing of cooperation among troops (branch arms), and all other measures for preparing an operation were implemented in the respective academy departments in conformity with the overall plan for conducting the war game. The adopted decisions were thoroughly discussed. In so doing, the main attention was given to analyzing the effectiveness of the actions of the two sides under different variants of a decision.

The decisions of the two sides were then reviewed by the directors of the war game at academy-wide assemblies held once or twice a month. In conformity with the research plan, the departments (game participants) were given in advance a list of the questions which were to be covered in their

reports.

Such a procedure for conducting a war game enabled the trainees to substantiate their decisions and theoretical conclusions not only by thorough analysis of the situation but also by specific calculations made on electronic computers. Thus, for example, in the discussion of the initial nuclear strike, the following reports were heard: "Analysis of the Results of the Initial Nuclear Strike Delivered by Both Sides, and Observations on the Further Conduct of Combat Actions by the 'East'" (Department of Strategy); and "Analysis of the Losses Suffered by the 'West' from the Initial Nuclear Strike, and the Possible Nature of the 'West's' Actions" (Department of Intelligence). Representatives from the Department of Operational Art of the Air Forces, the Department of Operational Art of the Navy, the Department of Rocket Troops and Artillery, and the Department of Air Defense reported on the effectiveness of the strikes by their forces, with analysis of the conditions which had been created for the further conduct of the operation. The main reports were widely discussed by all participants in the war game. In essence, the academy-wide assemblies turned into miniature theoretical conferences.

Not only department heads (their deputies) but also the instructors presented reports at the assemblies regarding decisions and research results. Such a method provided for bringing in a greater number of professors and instructors, not only for researching the questions assigned to the departments but also for active assessment of the operational-strategic situation and the adopted decisions. Objectivity in approaching the resolution of the questions was also promoted by the fact that they based the game on an actually existing enemy troop grouping and took into account the possibility of a buildup of enemy forces and means in the initial period of a war.

All of this made possible comprehensive, detailed research of a comparatively large volume of interrelated questions and the drawing of more or less valid conclusions and practical recommendations, which are being used in working out scientific research works.

A research game carried on over an extended period of time made it possible to tie in the questions being researched with the training process, to bring out innovations in good time, and to introduce them into the training practice of the students. At the same time, it must be noted that such a method of conducting war games leads to some overloading of instructors and is reflected in the time periods required for fulfilment of other tasks at which they must work simultaneously with their participation

in the game.

Thoroughness in researching the varied processes of armed combat in a theater of military operations is inconceivable without employing mathematical methods, computers, and keyboard calculators. Therefore, in order to produce a large quantity of calculations during the preparation and course of a game, specialists were brought in and computer equipment from various scientific research establishments was used.

For example, such tasks were carried out with the aid of computers: assessment of the effectiveness of nuclear strikes delivered by the enemy against targets belonging to us and by our forces and means against targets of the enemy; determination of the capabilities of the two sides to negotiate the opposing air defense under different variants for the disposition of groupings of air defense forces and for the organization of air raids; assessment of the radiation situation developing in the theater of military operations as a result of the initial nuclear strikes and also the radiation situation in the air, and the selection of flight routes for long range aviation so that the radiation dose received by the crew is not dangerous; determination of the radiation doses received by personnel when located in zones of radioactive contamination and when negotiating these zones; and assessment of the effectiveness of the actions of our antisubmarine submarines against enemy missile-carrying submarines and of our missile-carrying naval aviation and long range aviation against enemy carrier strike large units.

The employment of mathematical methods and computer equipment has made it possible to obtain quantitative assessments of different variants of combat actions and has contributed to increasing the effectiveness of research and the soundness of conclusions. During the exercises new tasks which must be carried out by computers became evident.

At the same time, the research games which were conducted showed that all questions in the sphere of troop control cannot be resolved by mathematical methods, since they make it possible to obtain only a quantitative assessment of individual elements of a situation. Machines are not able to provide for the implementation of a whole series of tasks in a short time, particularly the complex tasks with which staffs most often have to deal. The carrying out of such tasks can be achieved only by combining logical reasoning with appropriate calculations performed at certain stages of the operation.

The scientific research games which were conducted make it possible to draw the following conclusions.

1. Extensive discussion of the questions assigned for research, first at department assemblies and then also at academy-wide assemblies, made it possible to involve a large number of professors and instructors and to hear and assess their different viewpoints and make the most correct theoretical conclusions in conformity with the nature of the questions being researched.

2. The working out of sound theoretical conclusions on the basis of questions researched in games has made it possible to introduce greater refinement into the program of the applied training course of the academy students on such important principles as those of the preparation and conduct of offensive operations with the employment of nuclear weapons and with the employment of conventional means of armed combat. The results of the games are for the most part acceptable for the operational training of staffs of military districts and fleets as well.

3. Thorough study of the most important questions of training and of the conduct of modern operations contributes to the working out of military science works and scientific research projects by professors and instructors and also makes it easier for academy students to work out graduation theses.

4. This method of organizing and conducting research games is not ideal and does need improvement, particularly on questions of choosing the optimal initial data regarding the quantity of nuclear warheads, the rates of troop advance, the possible losses from enemy nuclear strikes, etc.

* * *

Taking into account that nearly all military academies conduct research exercises (games) and that the methods of conducting them vary, it is necessary, in our view, to generalize the methods of scientific research being employed during such war games and exercises, to select the most efficient of them, and to prepare more extensive recommendations on these questions.

Of invaluable assistance to the professors and instructors of the academies in the further working out of the theory of operational art and strategy are the suggestions and critical observations of generals and officers from military districts and fleets in response to the publication

by the academies of works dealing with the results of research games. Among these responses are many statements on the usefulness of research results and on their actual use in the operational training of command personnel and staffs.

Further exchange of opinions in the pages of the Journal "Military Thought" regarding methods of conducting war games will make it possible to raise the quality of scientific research in the field of military art, the role of which is increasing sharply under present-day conditions.