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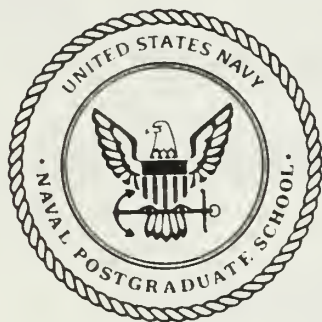
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THESIS

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SOVIET NAVAL OPERATIONAL ART

by

David Jeffery Kern

June 1988

Thesis Advisor:

R. H. S. Stolfi

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Soviet Naval Operational Art

by

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Lieutenant, United States Navy
B. S. , United States Naval Academy, 1981

Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF ARTS IN NATIONAL SECURITY AFFAIRS

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ABSTRACT

The Soviet theory of naval operational art is a body of knowledge which focuses the tactical capabilities of the Soviet Navy on achieving the strategic missions assigned them by the leadership of the Soviet Union. This body of knowledge guides the creation and execution of Soviet naval operations. Soviet military science establishes the theoretical foundation for the conduct of independent naval operations. Soviet troop control creates the planning processes by which Soviet naval commanders prepare for combat operations. Western analysis of the Soviet Navy has long neglected the Soviet theory of naval operational art. As a result, several unique characteristics of Soviet naval operations may be overlooked by Western naval officers. This research has found that the Soviet naval planning process is in many ways identical to that of the Soviet ground forces. This work also attempts to explain the role of the independent naval operation in the Soviet view of war. Finally, several analytical tools are suggested which may be employed to explore Soviet views on the conduct of naval operations. The topic of Soviet naval operational art presents many opportunities for future research.

TABLE OF CONTENTS

I.	INTRODUCTION	1
A.	THE NAVAL OPERATION IN SOVIET MILITARY THOUGHT	2
B.	THE NAVAL OPERATION IN SOVIET POLITICAL THOUGHT ...	12
C.	SUMMARY	14
II.	THEORETICAL BASIS OF SOVIET NAVAL OPERATIONAL ART	16
A.	PRINCIPLES OF MILITARY ART IN NAVAL OPERATIONS	19
B.	SOVIET THEORY OF NAVAL OPERATIONAL ART	36
III.	THE PREPARATION AND CONDUCT OF SOVIET NAVAL OPERATIONS	40
A.	METHODOLOGY	40
B.	PREPARATION OF INDEPENDENT NAVAL OPERATIONS	41
C.	PREPARATION OF COMBINED OPERATIONS WITH NAVAL PARTICIPATION	56
D.	CONTROLLING THE EXECUTION OF NAVAL OPERATIONS ...	58
E.	SUMMARY	61
IV.	HISTORICAL EXAMPLES OF SOVIET NAVAL OPERATIONS	65
A.	1942 SOVIET SUBMARINE OPERATION AGAINST BALTIC SLOCS	65
B.	1945 AMUR FLOTILLA SUPPORT OF THE SOVIET 15TH ARMY	74
C.	THE SOVIET VIEW OF THE NAVAL OPERATION	81
V.	EXPLORATIONS INTO SOVIET NAVAL OPERATIONAL ART	85
VI.	CONCLUSIONS	98
	LIST OF REFERENCES	105
	INITIAL DISTRIBUTION LIST	111

I. INTRODUCTION

One thing must be clearly understood. If someone were to hand to an American general, an English general, and a Soviet general the same set of objective facts and scientific data, with instructions that these facts and data must be accepted as unimpeachable, and an analysis made and calculations drawn on the basis of them, it is possible that the American and the Englishman would reach similar conclusions--I don't know. But the Soviet general would arrive at conclusions which would be radically different from the other two. This is because, first of all, he begins from a completely different set of basic premises and preconceived ideas, namely, the Marxian concepts of the structure of society and the course of history. Second, the logical process in his mind is totally unlike that of his Western counterparts, because he uses Marxist dialectics, whereas they will use some form of deductive reasoning. Third, a different set of moral laws governs and restricts the behavior of the Soviet. Fourth, the Soviet general's aims will be radically different from those of the American and the Englishman.

Col. Oleg Penkovskiy [Ref. 1]

Western analysis of the Soviet Navy has long avoided addressing the concept of "operational art" in Soviet naval thought. Many articles describe Soviet naval platforms and what tactics they are capable of. Strategic analysts, following a natural desire to explain why the Soviets have constructed their large navy, use these Soviet tactical characteristics to postulate potential roles and missions of the Soviet Navy. The conclusions reached by these analysts can be improved because the methodology they employ disregards a basic feature of Soviet military thought. This missing feature--operational art--is the subject of this thesis.

The Soviet military does not believe that tactics and strategy are directly linked in today's combat environment. The result of a single tactical battle cannot accomplish the tasks which a nation's strategy requires. The Soviets, therefore, believe that several battles must be organized to complete a strategic mission [Ref. 2]. How many battles will it take? Should these battles

take place in succession or simultaneously? What forces should be used in each battle? How can the effects of several battles be focused to achieve one strategic mission? Soviet operational art attempts to answer these types of questions.

The Soviet Navy fully participates in the study of operational art. Articles in *Morskoy Sbornik*, a Soviet naval periodical, frequently address topics of "operational" concern. Several naval articles will be used to examine the differences between Soviet naval and ground combat. Based upon these differences, the Soviet Navy has succeeded in developing a unique theory within the framework of Soviet operational art.

Special emphasis is placed on investigating the form and content of Soviet naval operations. The form of an operation describes the activities or patterns which define the shape of an operation. The content is then determined by the actions performed by the operation and the purposes behind these actions. Through the use of examples, this work concludes by illustrating how a knowledge of Soviet operational art could be used to better link Soviet naval tactics to the strategic employment of the Soviet Navy.

A. THE NAVAL OPERATION IN SOVIET MILITARY THOUGHT

1. Soviet Military Science

Soviet military science provides the theoretical and scientific basis for the conduct of naval operations. Soviet Marxist-Leninist philosophy creates a scientific structure based upon the belief that social and material development proceeds in a deterministic fashion governed by unchanging laws. The Marxist dialectic is used to describe how these social and material processes evolve

[Ref. 3]. Soviet military science uses the Marxist dialectic to examine these objective laws, in particular the laws of armed conflict.

V. Savkin, in his book, Basic Principles of Operational Art and Tactics, describes how the laws of armed conflict govern the complex social phenomenon of combat. [Ref. 4:p. 58] He explains that the laws of armed conflict are statistical in nature. The law of radioactivity is an example of a statistical law. The law of radioactivity cannot be used to predict when any one decay will occur; however, the law of radioactivity can successfully predict the total number of decays over a given period of time. The laws of armed conflict operate in a like manner. The Soviets do not believe that the laws of armed conflict can be used to predict the outcome of every combat action. They do believe, though, that the aggregate outcome of a group of combat actions is determined by the unchanging laws of armed conflict.

While the subject of Soviet military science may exist objectively, Soviet military science itself is the subjective creation of Soviet military research and thus subject to error. The Soviet Military Encyclopedia (SME) points out some past failures of Soviet military science:

In the interwar period, Soviet military science developed actively and creatively, focusing basic attention on an investigation into the nature of a possible future war, the forms and methods for waging it, trends in the development of the Armed Forces and the principles of military art... At the same time, on the eve of the Great Patriotic War, Soviet military science had not worked out fully enough the problems of the initial period of war, the setting up and conducting of a strategic defense and a counter-offensive, and the possibility of concealed attack had not been fully considered. [Ref. 5:p. 185]

For a period of years in the 1970s, the Soviet Navy had begun to use the term "naval science." In the book, Soviet Naval Operations of the Great Patriotic War 1941-1945, the preface begins "Naval science is a component of

Soviet military science, a branch of naval theory." [Ref. 6:p. ix] The SME definition of Soviet military science, though, does not mention naval science [Ref. 5:pp. 183-188]. Admiral Gorshkov in 1983 specifically avoided acknowledging the existence of naval science [Ref. 7:pp.27-38].

Soviet naval operations, therefore, must be studied within the scientific structure built by military science. Accordingly, the terminology used to describe Soviet naval operations carries the weight of scientific definitions. While this initially might impede the progress of a student of the Soviet Navy, once the definitions are learned, these standard terms allow for a more detailed study of Soviet naval topics. The Soviet terms battle (*boy*) and combat action (*boevyye deystviya*) both have unique scientific definitions. Even the terms combat action (*boevyye deystviya*) and military action (*voyenyye deystviya*) have slightly different meanings. This research attempts to present Soviet terms as they are portrayed in Soviet military articles. Consult the Soviet Military Encyclopedia (SME) [Ref. 8] or Military Encyclopedic Dictionary (MED) [Ref. 9] for more thorough, authoritative definitions.

One word of caution in reading translations of Soviet writings. The Soviet word, *deystviya*, means action in the general sense of combat or military action. The word, *operatsiya*, means operation in the sense of operational art. These two words are often translated to the same English word "operation." Only by consulting the original Russian or by thoroughly studying the context of the article can one properly interpret the word "operation" in English translations of Soviet writings.

2. Soviet Military Art

If military science is produced by scientists, then military art is produced by engineers. Soviet military art is the theory and practice of preparing for and executing military action. The theory of military art is a product of Soviet military science [Ref. 10]. The practical result of this theory is a set of principles upon which military action is based. Savkin writes, "The principles of military art are the basic ideas and most important recommendations for the organization and conduct of a battle, an operation, or a war as a whole." [Ref. 4:p. 119] These principles apply the unchanging laws of armed conflict to the contemporary combat environment. As a result, the principles of military art change as the character of modern combat changes. [Ref. 4:pp. 119-121]

Soviet naval art studies the preparation and conduct of military action by naval forces. [Ref. 11] While the study of military art is concerned with all combat environments, naval art studies warfare in sea and ocean theaters. Soviet naval art exists solely as a component of military art.

Soviet military art, and therefore naval art, divides its study of armed conflict into the subjects of strategy, operational art and tactics.

a. Strategy

Marshal N. V. Ogarkov describes strategy as follows:

The theory of military strategy as a system of scientific knowledge examines the conditions and the strategic nature of war, as well as the methods for conducting war and strategic operations. Military strategy as a practical activity is concerned with solving problems associated with defining in concrete terms the strategic tasks for the armed forces and the resources required to accomplish those tasks. Military strategy is also concerned with developing and implementing measures to prepare the armed forces, the theaters of military action, the economy and the population of the country for war, and measures to plan for war and strategic operations; it is concerned with planning armed forces deployment and leading them in

operations on a strategic scale, as well as with studying the capabilities of a probable enemy to conduct war and strategic operations. [Ref. 12]

Ogarkov's definition introduces several terms which require explanation in order to understand the Soviet concept of strategy.

Strategic goals are goals whose accomplishment will result in a basic shift in the course of a war. General strategic goals are defined by the political and military leadership of the Soviet Union to guide the conduct of the entire war. The SME gives the following as examples of general strategic goals: [Ref. 13]

- destruction of the enemy's armed forces;
- undermining of the enemy's economic potential;
- disruption of the enemy's political and military control; and
- occupation of enemy territory.

Each of these general strategic goals are subsequently broken down into individual strategic goals. It is the individual strategic goals which directly translate into strategic missions for Soviet forces.

The Soviet General Staff develops a plan based upon these goals for each of the Theaters of Strategic Military Action (TSMA). This plan is called the strategic operation. It assigns missions directly to fleet and front size military formations within the theater. The Main Navy Staff, as an adjunct to the General Staff, is responsible for preparing the naval sections of the strategic plans. [Ref. 14:pp. 283-289]

The Soviet General Staff uses two different methods to ensure that their strategic operations are carried out by naval fleets. First, the Main Navy Staff may exercise control for the General Staff. In that case, the General Staff would then send a representative to the theater to monitor the actions of

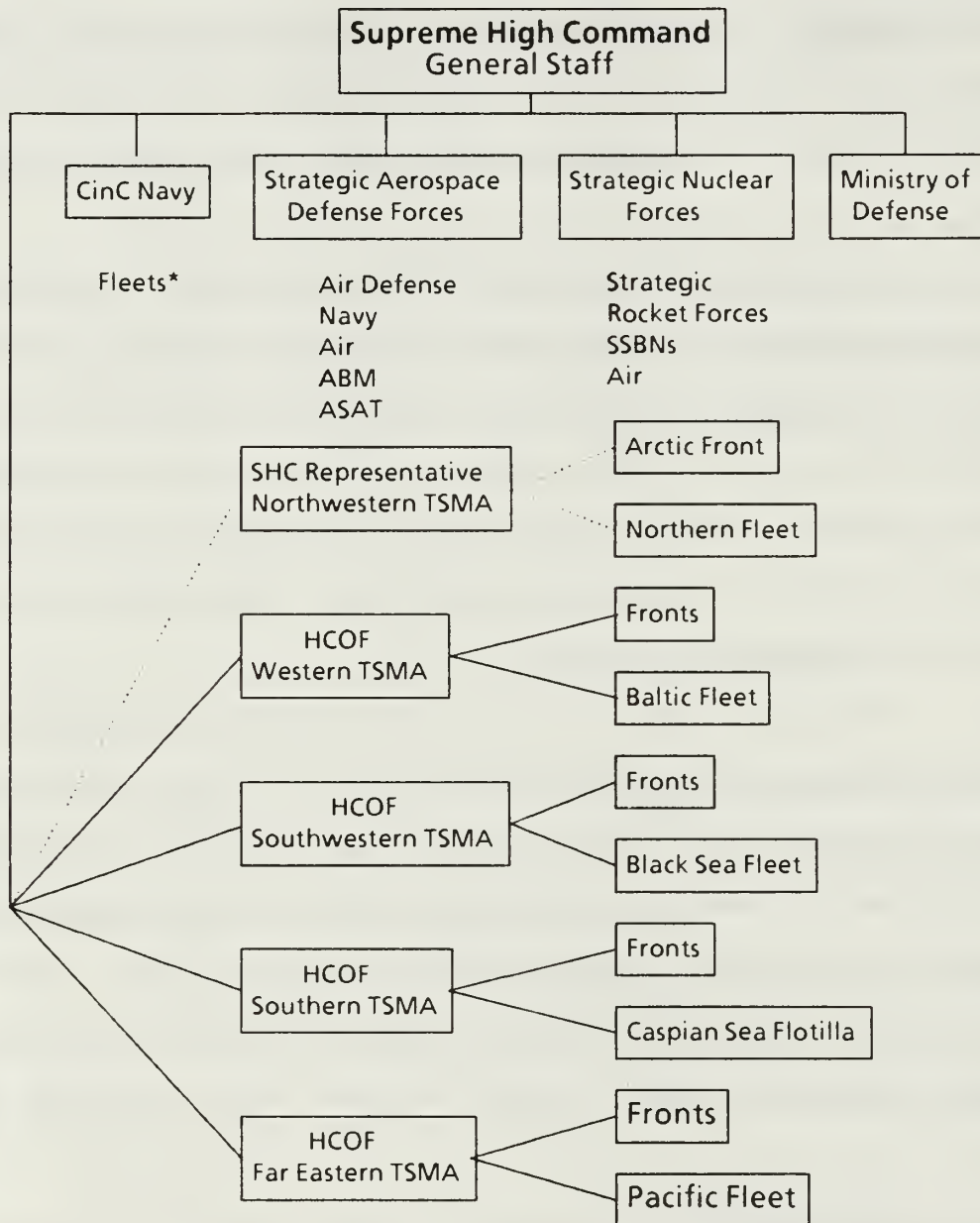
the fleet commander. These representatives act like "crisis managers" solving problems which develop as the combat situation changes. This appears to be the current method of control for the Soviet Northern Fleet. [Ref. 14:pp. 285-287]

In continental TSMAs, due to the number of forces involved and the complexity of the strategic plan, the General Staff representative is given a staff and a headquarters to work out of. These theater commanders control the actions of the fronts and fleets subordinate to them in order to execute the strategic operation. The Soviet Baltic, Black and Pacific Fleets operate under the control of theater commanders. [Ref. 14:p. 287] These strategic relationships are diagramed in Figure 1.

The Soviet ballistic submarine force (SSBNs) appears to be excluded from these standard methods of control. The range and power of submarine-launched ballistic missiles enable Soviet SSBNs to accomplish strategic missions by themselves. As a member of the Strategic Nuclear Forces, SSBNs do not participate in strategic operations. Instead, SSBN missions are organized by the General Staff and coordinated with the Strategic Rocket Forces and Long-Range Aviation to achieve a strategic strike. [Ref. 14:pp. 288-289]

b. Operational Art

Operational art is the theory and practice of preparing and executing operations by formations of the Soviet Armed Services [Ref. 15]. In practical terms, operational art implements the strategic operation by planning the combat (tactical actions) necessary to complete the assigned strategic



Fleets* - Normal planning and coordination of naval fleets plus control of Northern Fleet units not controlled by Strategic Nuclear Forces

SHC - Supreme High Command

HCOF - High Command of Forces

Figure 1. Command Subordination of Soviet Forces in Wartime

[Adapted from Ref. 14:p. 287]

missions. Naval operational art guides naval operational formations in accomplishing strategic missions.

The operational formation, *ob'yedineniye*, is formed to execute military operations [Ref. 16]. The smallest type, operational-tactical *ob'yedineniye*, is the basic building block of larger formations. Although the MED does not provide a naval example of an operational-tactical *ob'yedineniye*, a naval grouping called *diviziya* is a likely candidate. [Ref. 17] A *diviziya* is made up of either surface ships or submarines. A surface ship *diviziya* is composed of either several 1st Rank warships or several brigades of smaller warships of various types. (Moskva class cruisers, guided missile cruisers and nuclear powered submarines are 1st Rank warships.) A submarine *diviziya* either contains several submarine brigades or is directly composed of various nuclear or diesel submarines.

A second operational force grouping, operational *ob'yedineniye*, is the formation most often tasked with the accomplishment of operational missions. These operational missions, such as the destruction of an enemy carrier, assigns a task to be accomplished within a specified time period. The MED describes flotillas, squadrons and fleet naval air arms as examples of naval operational *ob'yedineniye*. [Ref. 16]

The largest operational force grouping is the operational-strategic *ob'yedineniye*. Naval fleets as operational-strategic *ob'yedineniye* are the largest operational formations which currently exist in the Soviet Navy. [Ref. 16] The activities of the fleet commander and his staff are a main focus of this study of naval operational art. This hierarchy of Soviet operational formations is shown in Figure 2.

<u>Designation</u>	<u>Naval Force</u>
Operational-strategic <i>ob'yedineniye</i>	naval fleet
Operational <i>ob'yedineniye</i>	flotilla, squadron, fleet air arm
Operational-tactical <i>ob'yedineniye</i>	<i>diviziya</i> of ships or submarines

Figure 2. Soviet Naval Operational Formations

The Soviet Navy is capable of executing either of two basic types of operations defined by operational art. The independent operation (*samostoyatel'naya operatsiya*) is capable of being conducted by a single branch of the Soviet armed forces. The MED lists only certain air, anti-air and some naval operations as potential independent operations, conspicuously neglecting both Soviet ground operations and the strategic strike of the Strategic Rocket Forces. [Ref. 18] The MED lists the following as independent naval operations (*morskoya operatsiya*): [Ref. 19]

- Disruption of enemy sea lines of communication (SLOC);
- Defense of naval basing areas and SLOCs;
- Destruction of enemy naval forces in enclosed seas and coastal waters;
- Destruction of enemy land installations;
- Destruction of enemy carrier forces;
- Destruction of enemy ASW forces; and
- Destruction of enemy missile submarines.

In addition to these independent operations, the Soviet Navy can participate in combined operations (*sovmestnaya operatsiya*). [Ref. 20] These combined operations are conducted by operational and tactical formations of various branches of the Soviet armed forces. The branch of service which has

the most important role in the operation will command the operation. The Soviet Navy can participate in several types of combined operations:

- Amphibious landing, usually commanded by a ground force combined arms commander but sometimes placed under control of a naval flotilla or squadron commander [Ref. 21];
- Anti-landing defense operation, always commanded by a ground force commander [Ref. 22]; and
- Air defense operation, commanded by an air defense force (PVO) commander [Ref. 23].

The more complex topic of combined-arms/combined-fleet operations is discussed in Chapter V.

c. Tactics

Soviet tactics is the theory and practice of preparing and executing a battle. The Russian word which translates into battle is *boy*. The word, *boy*, is also the root word for the Russian word for combat. In the Russian language, therefore, battle embodies both the essence of combat and tactics.

In the Soviet view, battle unites the tactical actions of fire, strike and maneuver into a single block of space and time [Ref. 24]. The battle is limited in time because, in a matter of hours, opposing forces will no longer be able to fight. One side or the other must disengage or surrender. The limits of combat exhaustion are determined by factors such as the size of weapons magazines or by the amount of damage a combat unit can endure. The Soviet concept of battle, therefore, has a distinct beginning and end. The battle is limited in scope to the opposing combat elements that are actually engaging in combat. The breadth of modern battle has grown with the introduction of weapons of greater range, accuracy and firepower.

Former Commander-in-chief of the Soviet Navy, Fleet Admiral S. G. Gorshkov, examines the concept of naval battle in his book, The Sea Power of the State. Gorshkov describes a naval battle as a clash in space and time between the offensive and defensive capabilities of opposing naval forces: As naval offensive weapons improve, as examples he mentions torpedoes and missiles, naval fleets must devote increasing energy and attention to destroying approaching weapons rather than eliminating the attacking enemy naval formations. [Ref. 25]

The offensive-defensive balance strongly influences the character of a naval battle according to Gorshkov. When the defensive measures of the enemy naval groupings are strong, attacking naval forces must bring diverse naval forces to bear on the enemy defenses. The coordination of torpedoes, sub-launched and air-launched missiles would constitute employment of diverse naval forces. Alternatively, when offensive naval weapons dominate the sea, the naval battle may be carried out by homogeneous forces (a Soviet expression meaning aircraft and submarines) launching their superior weapons. [Ref. 25]

B. THE NAVAL OPERATION IN SOVIET POLITICAL THOUGHT

Soviet military doctrine strictly subordinates an otherwise apolitical military science to the firm control of the Communist Party of the Soviet Union (CPSU). Soviet military doctrine answers questions which are beyond the realm of pure military science. Declarations on the likely nature of a future war are perhaps the most important of Soviet doctrinal questions. Why is this question beyond the realm of Soviet military science?

Military doctrine is developed and applied in the Soviet Union for a specific period of time. This doctrine is revealed in two forms, political and military-technical. As is so often quoted, Lenin restated for the CPSU the Clausewitzian proclamation that war is a continuation of politics by more violent means. Military science cannot participate in the determination of political goals. The political aspect of military doctrine exists to provide an acceptable linkage between the political goals and the strategic goals of the Soviet Union in any potential conflict. [Ref. 26]

The military-technical aspect of doctrine concerns itself with determining the methods of waging war, military development and the preparation of the armed forces. Certainly these decisions depend to some extent on capabilities as defined by Soviet military science, but both the political and military-technical aspects of military doctrine direct the study of military science towards the most pressing problems of the Soviet nation as defined by the CPSU [Ref. 26]

For many years now Soviet military doctrine has stated that nuclear war is not inevitable, and that if war does begin there may be a prolonged conventional phase. The accuracy of these statements remains in doubt because, fortunately, the CPSU has never tried to conduct a nuclear war. One theme in particular, though, seems to resonate through the Soviet military structure. A future conventional war may at any time escalate to use of nuclear weapons. The implications of this assumption on the planning of Soviet naval operations will become clear in subsequent discussions. One might conclude that this implies a conceptual firebreak between conventional and nuclear

weapon use. Does the nuclear firebreak operate identically both on land and at sea? This question remains largely unanswered.

C. SUMMARY

In order to better conceptualize the meanings of Soviet strategy, strategic operation, operational art and tactics, think of the word operation as implying the existence of a written plan. Strategy is the delineation of the goals to be achieved in war, and strategic operations are the written plans for achieving those goals. Tactics is the actual combat of the war, but what is left for operational art?

Operational art is the Soviet military skill of preparing and executing a plan in pursuit of strategic goals. This plan neither defines the goals nor the tactics needed for combat. It exists as a link between Soviet strategy and tactics. The Soviet operational plan organizes tactical actions. It provides the cohesion necessary to ensure that battles are not fought in vain, but instead culminate in the achievement of a strategic goal.

This study chooses to focus on naval operational art for two reasons. First, strategies can be created and destroyed by the political and military leadership of the Soviet Union. A study of Soviet strategic concepts always labors under the question of whether or not the Soviet will execute their current strategy or create a new one. In addition, strategies rarely fit the actual circumstances which bring a nation to war and nearly always need modification.

The two remaining topics, naval operational art and tactics, are somewhat less mercurial. Soviet naval tactics are firmly linked to actual weapons system capabilities and Soviet naval training programs. These cannot be changed as capriciously as strategy can. In peacetime, tactics change at a rather steady rate

while in wartime, combat experience greatly accelerates the development of tactics. A study of Soviet tactics should prove valuable for at least the beginning of a potential future conflict.

Naval operational art is the subject of this study because it is being neglected while the study of Soviet strategy and naval tactics proceeds. Because naval operational art is conceptually anchored in Soviet naval tactics, it should prove as worthy a field of study as tactics has. This thesis hopes to further discussion on just what is Soviet naval operational art.

II. THEORETICAL BASIS OF SOVIET NAVAL OPERATIONAL ART

The theoretical basis of Soviet naval operational art is inextricably linked to the Soviet's view of armed conflict as a single, unified whole. The operational level of combat cannot be studied in isolation from the strategies and tactics of war. Instead, Soviet military art has produced a list of general principles to guide the conduct of strategy, operational art and tactics. These principles, as listed in the SME, are: [Ref. 27]

- High combat readiness must be maintained regardless of the conditions under which a war may start or be conducted.
- Probability of success is enhanced by surprise, decisive and aggressive combat action and a continuous striving to gain and retain the initiative.
- Complete utilization of all military capabilities and assets are required to achieve victory.
- Successful combat action depends upon coordinated use and cooperation of operational (tactical) formations.
- Decisive concentration of primary combat efforts at the necessary moment and in important directions is required to complete the combat mission.
- Successful combat action is characterized by simultaneous defeat of enemy formations to the full depth of their construction. Timely, intensive and bold maneuver is required in order to achieve a high rate of destruction within a short amount of time.
- Calculation and complete utilization of moral-political factors must be made.
- Firm and continuous troop control must be maintained.
- There must be uncompromising resolution of problems in the execution of mission, initiative.
- Complete support must be maintained for combat action.
- Timely restoration of reserves must be made along with maintenance of combat effectiveness.

This chapter describes how these general principles are refined into operational principles for use by the Soviet Navy. This process of refinement may be thought of as occurring in stages. First, the general principles of military art are listed and defined. Second, each general principle is applied to the conduct of operations. Third, the operational contents of each principle are examined in the context of the naval combat environment. The Soviet theory of naval operational art derives from the application of the general principles of military art in the preparation and execution of naval operations.

This methodology for constructing the Soviet theory of naval operational art is based upon the following evidence. Some citations in the SME define a principle first with a general description and then in some combination of strategic, operational and tactical terminology. For example, the SME citation on coordination (*vzaimodeystviye*) describes the general concept of coordinated use of combat groupings. [Ref. 28] The SME then proceeds to define tactical, operational and strategic coordination. The same is true for the SME citation on surprise (*vnezapnost'*). Other citations, such as troop control, combat support and massing of forces and means are described primarily in operational and tactical terms. These definitions take great care to explain the application of each principle to the levels of military art.

Further evidence is suggested by Vice Admiral K. Stalbo's articles from the now labeled Stalbo-Chernavin debate in *Morskoy Sbornik*. In the opening article of the debate, "Some Issues on the Theory of the Development and Employment of the Navy," Stalbo lists eight "specific features inherent to naval warfare." [Ref. 29:p. 24]

- Offensive actions at sea against enemy combatants do not attempt to capture geographical objects. Exceptions are joint and amphibious actions.

- Defensive actions by formations of ships are not always required to hold geographical objects.
- Objectives are achieved in naval battles by concentrating combat efforts on the most heavily defended targets. (Stalbo uses the example of WWII naval actions against aircraft carriers.) Naval combat actions depend upon gaining command of the sea.
- The deployment of naval combatants to their designated areas for conducting combat action may take from several weeks to a month to complete--even for a tactical action.
- The scope of contemporary operations at sea may be global, especially in the employment of strategic missiles.
- As opposed to the other Soviet Armed Services, the Soviet Navy conducts battle and operations in four separate media. (i.e., on the ocean, under the ocean, in the air and on the land)
- Fleets employ diverse weapons (ballistic missiles, aircraft, air defense weapons, naval infantry, engineer and signal troops) which, along with ships, provide for broad capabilities in the contemporary combat environment.
- Some naval forces (amphibious assault forces, carrier aircraft, etc.) are limited in their abilities by weather.

Several of Stalbo's statements were attacked by the Soviet officer destined to succeed Gorshkov as the CinC of the Soviet Navy. Admiral Chernavin, then Chief of the Main Navy Staff, expressed his concern that Stalbo had overemphasized the unique and independent aspects of the Soviet Navy to the detriment of a unified Soviet military strategy. Stalbo had even developed a list of principles of military art similar to the list provided here from the MED. Chernavin specifically criticized Stalbo's inaccurate characterization of two principles. [Ref. 30:pp. 20-4]

While the Stalbo articles have certainly been faulted by several Soviet naval authors, his list of "specific features inherent in naval warfare" seems to have been vindicated. In a 1986 article by Admiral P. Navoytsev, then First Deputy Chief of the Main Navy Staff, two of the "specific features" noted by Stalbo

resurface. Navoytsev repeats that naval combat action occurs in four media and that independent naval operations usually do not pursue a geographical objective. [Ref. 31:p. 19]

The question of how to use these "specific features" is made clear by Admiral V. Sysoyev's contribution to the Stalbo- Chernavin debate. [Ref. 32:pp. 21-27] Sysoyev explains that these features of naval warfare are to be combined with the general principles of military art. He uses the example of conducting a naval battle to destroy a heavily defended target. The concept of attacking the defended target is combined with the general principle of concentrating combat effort to achieve superiority over the enemy. The correct naval action is to attack the defended target via the axis with the weakest defense. This maximizes the superiority of the attacking forces over the enemy defense.

This three stage methodology used here to develop the theory of naval operations may be too crude for a Soviet naval officer with a doctorate in military science. For example, no attempt is made to identify principles which may apply to each of the combat arms of the Soviet Navy. But from the point of view of a Western naval officer studying Soviet Naval operational art, the following discussion provides a basic framework for understanding Soviet naval operational theory.

A. PRINCIPLES OF MILITARY ART IN NAVAL OPERATIONS

1. High combat readiness must be maintained regardless of the conditions under which a war may start.

Combat readiness (*boyevaya gotovnost'*) is a measure of the preparedness of combat forces to accomplish assigned missions. [Ref. 33] In

peacetime, combat readiness measures the ability of combat forces to mobilize from a peacetime to a wartime posture. For that reason, an important requirement for Soviet combat readiness is the ability to repel an enemy surprise attack. (Possibly a lesson learned from World War II.)

In wartime, combat readiness measures the essential combat capacity of combat troops. Various indicators, such as numerical strength, availability of materiel and personnel training, are related to the nature and intensity of combat action to determine a formation's combat capacity. [Ref. 33]

A critical measure of Soviet combat capacity is the ability to survive a nuclear attack. According to Soviet norms, a combat formation's capacity to fight is severely degraded when 50 to 60 percent of its personnel and equipment are no longer functioning but control is retained. If control is lost, the formation is considered to have no capacity to fight. Nuclear weapons threaten to rapidly reduce a nation's combat capacity. [Ref. 33]

No unique operational or naval aspects appear in Soviet discussions of combat readiness. Admiral K. Makarov (current Chief of the Main Navy Staff) merely echoes the SME definition of combat readiness:

Under contemporary conditions "combat readiness of naval forces" means their ability in any situation to begin combat operations in an organized fashion and carry out their assigned missions to repulse attacks and smash the aggressor's naval forces in set time periods. [Ref. 34:p. 18]

Admiral Chernavin in 1982 [Ref. 30:p. 24] and again in 1986 [Ref. 35:pp. 26-33] also stresses the importance of combat readiness. The most stressed element of combat readiness is the time factor. Makarov explains that modern weapons have increased the complexity of maintaining combat readiness while at the same time reducing the time available for this

maintenance to take place. [Ref. 34:p. 19] The time pressure felt by Soviet naval staffs must be exacerbated by the need to deploy naval forces early due to relatively long transit times. Time is especially critical if Soviet naval action is to begin concurrent with Soviet ground action.

2. Probability of success is enhanced by surprise, decisive and aggressive combat action and a continuous striving to gain and retain the initiative.

Surprise, decisiveness, aggressiveness and initiative are the operative words in this principle. Surprise (*vnezapnost'*) is created by employing actions which the enemy does not anticipate. By judiciously choosing the time and method of attack, it is possible to catch the enemy off guard and in effect, paralyze his ability to fight. [Ref. 36:p. 161]

Operational surprise is achieved through choices made in organizing and executing an operation: [Ref. 36:p. 162]

- secretive preparations;
- anticipating enemy deployments;
- unexpectedly commencing the operation;
- attacking the enemy in unexpected sectors;
- continually striving to vary the conduct of operations and employ new weapons;
- unexpectedly counterattacking the enemy; and
- properly choosing the time to prepare a counterattack.

The SME remarks that these operational measures create a temporary condition of surprise which then must be exploited by the operational commander.

Captain 1st Rank Aristov examines the use of surprise at sea in a 1985 Morskoy Sbornik article. Aristov repeats the definition of surprise from the

SME and cites many of the same measures for achieving surprise. Perhaps again, because of the extended deployment times anticipated for Soviet naval operations, Aristov draws attention to the fact that naval surprise is heavily dependent upon the employment of electronic warfare and reconnaissance forces. He points out the importance of reconnaissance in properly assessing the situation and recommends the employment of electronic warfare to neutralize the enemy's reconnaissance means. [Ref. 37] The SME also acknowledges that electronics can detect the approach of naval forces (as well as other forces); therefore, in order to achieve surprise, friendly forces must be masked and enemy reconnaissance disrupted. [Ref. 36:pp. 161-3]

Combat activeness (*bojevaya aktivnost'*) is the Soviet term which incorporates aggressive and decisive combat action. Forces exhibiting combat activeness exert maximum effort in completing their combat missions. Activeness is less a description of combat than it is a psychological characteristic of the fighting man. Troops with courage, creativity and a constant readiness to engage the enemy naturally display combat activeness. [Ref. 38]

Admiral Navoytsev uses historical analogy to illustrate the military significance of bold action. In the Great Patriotic War (1941-1945), the Baltic Fleet submarine force was bottled up in the ports of Kronshtadt and Leningrad by the Axis forces. According to Navoytsev, through bold and daring action, submarines were able to penetrate enemy ASW barriers and attack German SLOCs. Navoytsev claims that the results of these attacks significantly affected the course of the war. [Ref. 31:p. 22] Perhaps because this principle describes a psychological condition, neither the SME nor Navoytsev discuss any specific operational or naval aspect of combat activeness.

The Soviet concept of initiative (*initsiativa*) is quite complex and subtly different from generally accepted Western definitions. In the context of planning and executing operations, initiative describes the ability of the Soviet commander to complete combat tasks in the face of a changing combat situation with the purpose of imposing his will upon the enemy [Ref. 39]. This type of initiative is generally described as seizing or gaining the initiative which disrupts the actions of the enemy. Stalbo notes that seizing the initiative by concentrating overwhelming forces allows the commander to choose the place and time of the attack [Ref. 40].

Soviet initiative as it applies to the actions of combat personnel is of such significance in modern combat, that it has become a principle of military art in and of itself. The principle of initiative is later described in this chapter as the ninth general principle of military art.

3. Complete utilization of all military capabilities and assets are required to achieve victory.

Combat capabilities (*boevyye vozmozhnosti*) are the quantitative and qualitative measures of a combat force's ability to complete a specific mission within a given amount of time. Combat capabilities are variable qualities based upon the changing combat situation. The commander of a combined-arms operational formation bases his decision upon the measured combat capabilities of tactical formations under his command. In the Soviet Navy, this implies that the fleet commander directly monitors the combat capabilities of naval tactical forces. [Ref. 41]

The combat capabilities of an attacking ground force formation is summed up by describing the geographical width and depth of front which the formation can capture. Soviet naval actions do not pursue geographical

objectives. Accordingly, a Soviet naval formation's capability is measured by:
[Ref. 41]

- the probability of damage to enemy ships, aircraft, etc;
- the expected number of targets damaged to the degree specified; and
- the formation's reliability in combat.

4. Successful combat action depends upon coordinated use and cooperation of operational (tactical) formations.

Coordination (*vzaimodeystviye*) is the organization of actions by various combat forces in terms of missions, area and time within a common battle or operation. Coordination is most important in battles or operations whose success depends upon the joint action of various combat forces. [Ref. 28:p. 123]

Operational coordination is the organization of the combat missions of operational and tactical formations by objective, place and time in an operation conducted in an operational sector. This organization is established by the operational commander. [Ref. 28:pp. 123-4]

While coordination is the organization of subordinate force missions, Rear Admiral Yu. Bystrov (Deputy Chief of the Main Navy Staff) explains that cooperation is the system of interconnected actions organized by these subordinate formations "among themselves" as shown in Figure 3. [Ref. 42:p. 25]

The organization of coordination and cooperation is necessary to maximize the combat effort achieved by diverse naval forces. The combat capacity of forces vary. This principle explains that these forces should be organized so that the strengths of one force cover the weaknesses of other

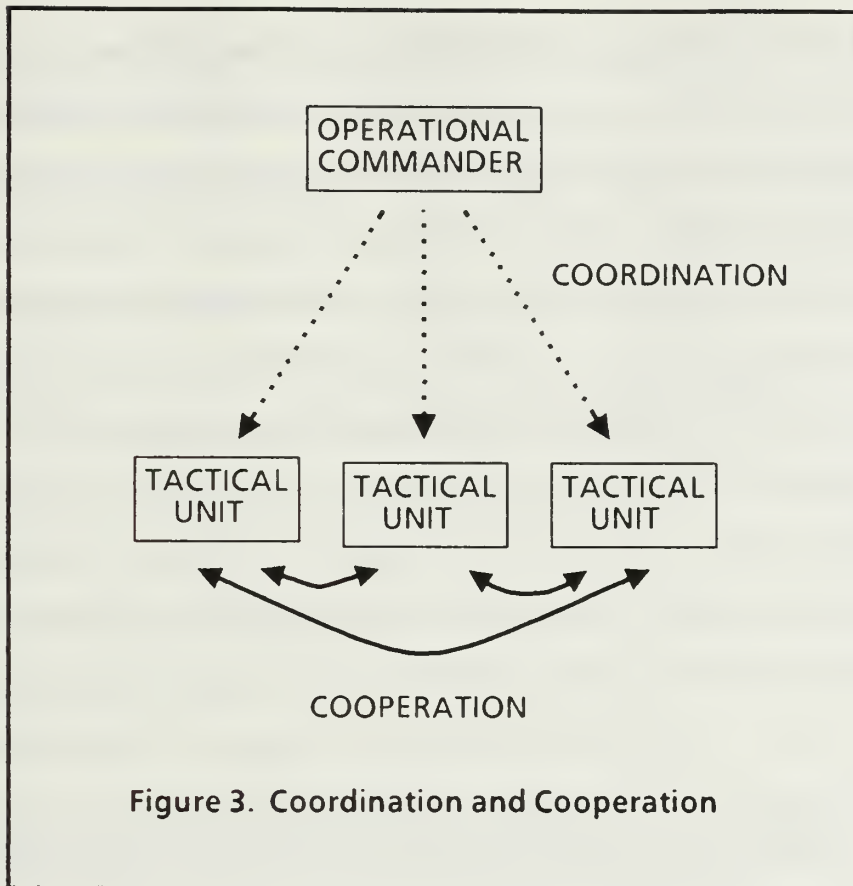


Figure 3. Coordination and Cooperation

forces. In this way, the Soviets believe that they derive maximum efficiency from their forces. [Ref. 42:p. 24]

Bystrov provides a particularly good example of how to coordinate strikes of Soviet submarines and aircraft. The enemy groupings anti-air defense (AAW) and antisubmarine defense (ASW) are first compared. If the enemy's AAW defense is stronger, then Soviet submarines should attack first thereby "creating favorable conditions" for the subsequent air attack. If the enemy's ASW defense is stronger, then Soviet aircraft should attack first. [Ref. 42:p. 25]

The coordination of naval action is affected by several specific naval features. The conduct of naval action in four media combined and the effects

of weather on naval sensors (reconnaissance, communications, etc.) combine to greatly complicate the maintenance of coordination at sea. Navoytsev notes that, with modern technological means (including spaceborne systems), the creation of controllable submarine tactical formations is only now becoming feasible. [Ref. 31:pp. 22-3] Navoytsev's comments demonstrate the Soviet desire to increase the capability of their submarines to communicate with each other and with other platforms in order to enhance coordination.

The principle of coordination and cooperation also reveals the significance of why Stalbo listed the diversity of naval forces as a specific feature of naval action. It is the diversity its forces that enables the Soviet Navy to conduct independent naval operations. On the other hand, to the extent that the Soviet military leadership sees a need for independent naval operations, the Soviet Navy will be supplied with requisite forces. Remember Gorshkov's description of naval battle, coordination of diverse forces can overcome stiff enemy defense.

5. Decisive concentration of primary combat efforts at the necessary moment and in important directions is required to complete the combat mission.

The massing of forces and means (*massirovaniye sil i sredstv*) concentrates the efforts of combat forces in order to rout the enemy and achieve the goal of the combat or operation. [Ref. 43:p. 179] The objective of the operation or battle is twofold: the destruction of the enemy and the attainment of some goal. The SME definition of combat mission explains that the objective of an operation or battle is generally the "destruction (annihilation) of the enemy's main forces in a specified area to a prescribed

depth and the seizing of a designated position or area." [Ref. 44] These definitions apply to combat in a continental theater.

A specific feature of naval action is that it does not generally pursue the attainment of some geographic objective. Only in defensive naval actions (i.e., defense of naval bases and SLOCs) is the naval operation tied to land objectives. This principle is therefore altered as it is applied to naval action.

This distinction is tacitly acknowledged in the SME. In describing naval action in a combined amphibious operation, the massing of naval forces is used to support the attainment of objectives ashore. In independent naval operations, the objective of naval action is described as devoid of geographical content. The sole purpose of independent naval action is the destruction of the most important enemy ship groupings. [Ref. 43:p. 180]

6. Simultaneous defeat of enemy formations to the full depth of their construction. Timely, intensive and bold maneuver in order to achieve a high rate of destruction within a short period of time.

In the Soviet theory of combined-arms combat, the achievement of depth in combat action is accomplished through the maneuver of resources, nuclear strikes and fire. In the 1984 edition of V. G. Reznichenko's book, Tactics, maneuver is described as making it possible to: [Ref. 45:p. 49]

- seize and retain the initiative;
- disrupt the enemy's plan;
- conduct combat in a changing situation;
- complete the objectives of a battle in less time with fewer losses; and
- defeat a superior enemy in detail.

Operational maneuver is ordered by the operational commander for the purpose of completing assigned combat missions. Operational maneuver

includes the retargeting of air and missile strikes and the redistribution of logistical elements. Naval forces are maneuvered by directing and redirecting naval tactical formations in the course of carrying out missions along various operational axes. [Ref. 46]

Both Stalbo and Sysoyev make reference to deep maneuver in naval action. Stalbo describes deep maneuver as striking the enemy formation to the full depth of its deployment. [Ref. 40:p. 17] Sysoyev, in referring to the development of military theory between the world wars, explains that naval forces learned to destroy enemy formations to their full depth in combined operations. He states that the concentration of effort, deep maneuver and simultaneous destruction in depth have become "guiding principles in defining the content of the naval operation." [Ref. 47:p. 27]

In order to visualize how a Soviet naval commander might employ this principle in an independent naval operation, consider a possible Soviet plan to disrupt NATO SLOCs. From the Soviet point of view, the depth of the SLOC would extend from the ports on the U.S. Eastern seaboard to facilities along the European Atlantic coastline. A Soviet operation in depth, therefore, might include disruption of U.S. port facilities by Soviet submarine launched cruise missile attacks, disruption of NATO convoys by Soviet submarines and ground launched missile attacks on NATO ports.

Deep maneuver becomes more important in the destruction of time urgent targets. An operation to destroy an approaching U.S. carrier battle group might include the simultaneous launch of air and submarine missile attacks while torpedo attacks are attempted inside the battle groups defensive

screen. The coordination of attacks in depth is expected to disrupt the carrier battle group defenses just when they are needed most.

7. Calculation and complete utilization of moral-political factors.

Moral-political factors (*faktor moral'no-politicheskiy*) are defined as follows in the 1973 edition of Military Pedagogy, a Soviet military textbook:

Moral-political traits define the moral-political orientation of the individual and the moral character traits of the soldier--that is, his outlook, ideals, socially useful interests, moral-political feelings, a sense of duty, Soviet patriotism, hatred of the enemy, feelings of proletarian internationalism and personal responsibility for defending the Homeland and the achievements of socialism, a sense of honor, collectivism, mutual aid, and so on. [Ref. 48]

The Soviet commander carries great responsibility for the moral-political state of his troops. Reznichenko provides the following prescription for his readers: [Ref. 45:p. 51]

- know the moral-political state of the troops and work aggressively to reinforce that state.
- study the moral-political qualities of the enemy. Discover both his strong and weak points and work aggressively to counteract enemy propaganda.
- Exert an ideological and psychological influence upon the enemy.

This principle is also listed by Stalbo in his opening articles of the Stalbo-Chernavin debate but he provides no discussion of its content. Moral-political factors, while frequently mentioned in Soviet naval articles, appear to have no particular operational or naval content.

8. Firm and continuous troop control must be maintained.

Troop control (*upravleniye voyskami*) is the set of activities carried out by the organs of leadership (commanders, staffs, political organs, etc.) to prepare and execute combat action. The process of troop control regulates: [Ref. 49]

- continuous collection, display and analysis of situational data;

- decision-making;
- determination of the missions of subordinate forces;
- detailed operational planning;
- organization of support of combat action;
- the training of forces and staffs;
- the organization of political work; and
- monitoring and assisting subordinate forces.

The process of troop control is perhaps the single most influential principle in the conduct of Soviet naval operations. Troop control focuses on the activities of the operational commander. As such, it determines the form of naval operations while the other principles influence their content. Soviet troop control does not appear to contain any special features when employed by the Soviet Navy. In fact, a common planning and control system greatly enhances the Soviet Union's ability to integrate the actions of its five armed services.

9. There must be uncompromising resolution of problems in the execution of missions, initiative.

The SME states, "The demonstration of initiative is one of the most important conditions of successful action." [Ref. 39] Demonstration of initiative in the Soviet military starts with the readiness of individuals to take responsibility for their independent decisions. As stated earlier, initiative can mean the striving to find the best means possible for fulfilling assigned tasks. But in the context of resolving problems, initiative takes on new meaning.

The combat situation, at sea or on land, can change rapidly in a modern conflict. The Soviets feel that problems will develop because of the highly dynamic nature of warfare and the increasing vulnerability of

communications to enemy attack. Commanders must demonstrate initiative in combat when the plan being executed no longer corresponds with the actual situation. In particular, there may be no time or possibility of receiving new orders from higher authority. When this situation occurs, the battlefield commander is expected to assume responsibility for the problem and take action.

The Soviet Navy reinforces the need for initiative with historical examples in books and articles. For example, at midnight on September 22, 1941, a detachment of landing craft were supposed to join with a main assault force for a Soviet landing at Grigoryevka in the Black Sea. An attack by German bombers destroyed many important planning documents and injured several of the senior naval officers involved. In the resulting disruption of the plan, the landing craft were delayed almost three hours in reaching the main body of the assault force. Rear Admiral Gorshkov, using his own initiative, commenced the landing with small boats and rowboats:

The landing of a tactical assault force at Grigoryevka undoubtedly deserves favorable marks, in both its conception and execution, for facilitating achievement of its objective. The success of the landing and the landing operations ashore was to the greatest extent governed by the timely initiative of Rear Admiral Gorshkov in beginning the landing on ship's launches without waiting for the landing craft detachment, and by the synchronized operations of rifle divisions advancing on the front and the landing force. [Ref. 6:pp. 100-101]

It is important to recognize the theoretical limits of Soviet initiative. A Soviet commander may use initiative in a changing situation to ensure that his combat mission is completed. The commander's individual decision, though, may not change the objectives, time and place of his assigned combat mission. Is this different from initiative in the U.S. military?

At the tactical level of combat, both Soviet and U.S. commanders are expected to accomplish their assigned combat missions. The Soviet tactical commander is assigned a mission with a designated target, time and place. The Soviet tactical commander's basic plan of attack is generally approved by his senior commander in advance. The Soviet tactical commander demonstrates initiative only when a changing situation warrants it. A U.S. tactical commander generally receives a combat mission which designates target, place and a time period for mission accomplishment. The U.S. commander is trained to execute his mission based upon his own judgment of the situation. As a result, the U.S. commander will employ his initiative much more frequently than his Soviet counterpart.

This same phenomena is magnified at the operational level of combat. Soviet operational commanders and their U.S. counterparts by rank assume responsibility for large groups of forces. Soviet fleet commanders are particularly well positioned to exercise initiative in as much as they work closely with a representative of the General Staff who may approve changes in operational plans. But for the same reason as cited before, U.S. naval commanders will tend to display initiative much more frequently than their Soviet counterparts.

10. Complete support must be maintained for combat action.

Support of combat action (*obespecheniye boyevykh deystviy*) is carried out by a system of combat or operational support, rear support, special support and technical support. The distinction between combat and operational support is based upon the scale of combat action. Combat support assists in the

preparation and execution of battles while operational support prepares operations. [Ref. 50]

There are several types of combat (operational) support common to the Soviet armed services. Reconnaissance, defense against weapons of mass destruction, radioelectronic combat, deception, engineer support and security measures are widely employed. Several types of combat (operational) support are employed exclusively by the Soviet Navy:

- Air defense of naval forces, a set of measures which organize the actions of antiaircraft weapons on ships and naval bases and naval fighter aviation coordinated with National and Army air defense forces to protect naval forces at sea and in base against enemy air strikes [Ref. 51];
- Antisubmarine (ASW) support, a set of measures which organize the actions of both stationary and maneuverable ASW forces in protection of naval bases, naval formations, amphibious detachments and key straits or narrows [Ref. 52];
- Antimine support, a set of measures which organize the surveillance and reporting of detected mines in naval basing areas and zones of operations, the sweeping and destruction of mines, the piloting of ships behind minesweepers and the avoidance of mines in order to protect naval warships and transports from mine damage [Ref. 53]; and
- Antiboat defense, a set of measures which the surveillance and warning necessary to destroy enemy small combatants before they can damage naval bases of transiting formations of ships [Ref. 54].

Rear support is a system of logistic and specialized technical support organized by Rear Services of the Soviet Armed Forces, a branch of the Soviet armed services. Logistic supply, airfield engineering and medical support are examples of rear support activities. [Ref. 50]

Special support activities evaluate terrain and geodetic data and prepare detailed topographical charts for combat units (topogeodesic support). [Ref. 50] Navigation-hydrographical and hydrometeorological support is specifically organized in the Soviet Navy to provide fleet forces with necessary

situational information, equip ships with navigation, oceanographic and hydrometeorological equipment in order to deploy a system of navigational facilities in oceanic theaters. These support systems both enhance the navigational safety of Soviet naval actions but increase the weapons effectiveness of fleet units. [Ref. 55:pp. 21-22]

Technical support is organized to maintain the operability of Soviet military equipment. Each branch of the Soviet Armed Forces uses rocket engineering, electronics engineering, artillery engineering, motor engineering and others. In addition to these common technical support measures, the Soviet Navy is free to organize the technical support necessary to maintain naval equipment. [Ref. 50]

Chernavin specifically emphasized reconnaissance and radioelectronic combat as crucial support measures for the Soviet Navy. It is reconnaissance which collects the information vital to the preparation and execution of operations. Chernavin expresses the belief that the importance of naval reconnaissance is growing. First, because of the expanding scope of naval operations, but also because of the dynamic nature of warfare at sea. He states, "One cannot dispute the opinion of many military theoreticians that the main thing that will have to be organized in combat in the future will be the battle for information." [Ref. 55:pp. 16-7]

Captain 1st rank A. Alkhimenko describes the important elements of the operational organization of support for naval action. Alkhimenko defines operational organization as a system of static and mobile facilities echeloned in depth. Alkhimenko's main theme is that facilities such as naval bases, airfields, reconnaissance and communications stations and logistical bases need to be

deployed as close to important combat areas as political and geographic constraints allow. [Ref. 56]

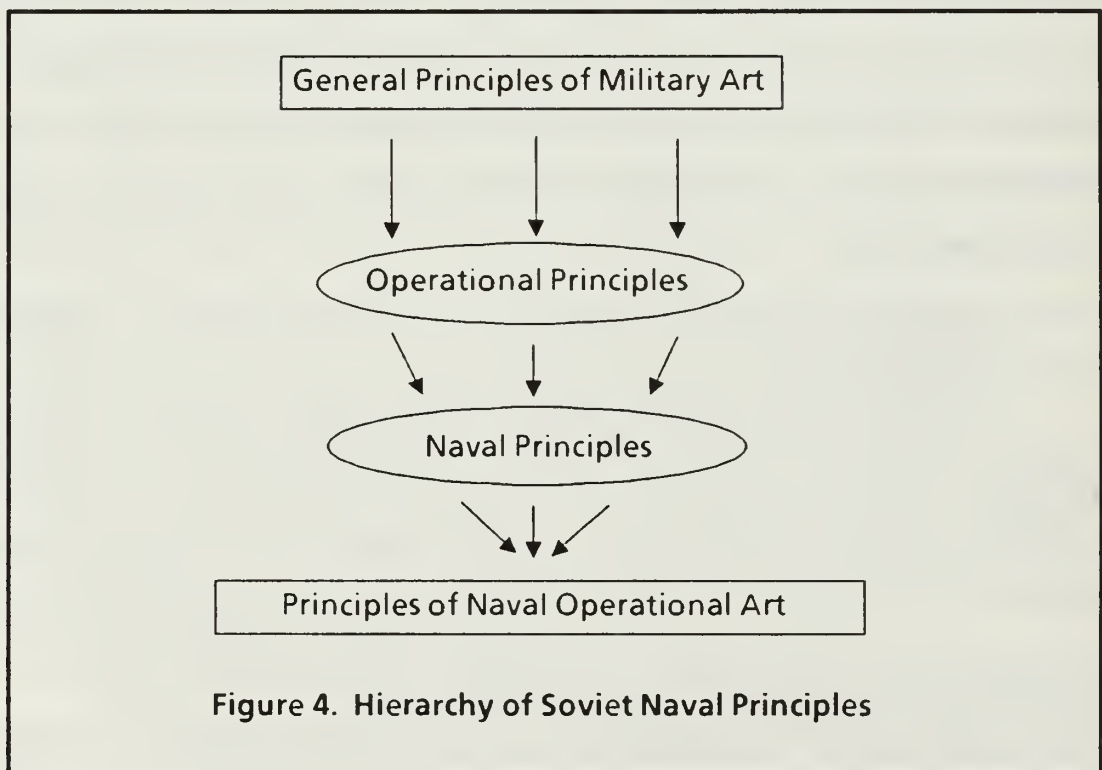
Alkhimenko emphasizes three important features of any naval basing system. First, mobile facilities are more valuable than static facilities because of their reduced vulnerability to nuclear attack; nevertheless, he notes that static shore bases still represent the foundation of the the Soviet naval basing structure. Second, islands are increasingly important in the operational organization of support. They occupy advantageous military and geographical positions and shorten lines of communication between basing facilities and areas of combat. Third, forward air basing is particularly important for the successful accomplishment of independent naval operations. They provide the necessary basing for Soviet naval aviation to operate in forward ASW areas, counter enemy ASW barriers, provide reconnaissance and participate in control of SLOCs. [Ref. 56]

11. Timely restoration of reserves and maintenance of combat effectiveness.

Combat effectiveness (*boevaya effektivnost'*) refers not to the abilities of combat troops but instead to the effectiveness of combat equipment. Combat effectiveness is a characteristic of weaponry which measures the amount of damage inflicted on enemy targets within fixed periods of time with fixed amounts of material. This measurement serves as the basis for determining combat capability in the planning of operations. Combat effectiveness is estimated according to established formulas, tables and graphs. [Ref. 57] This principle reveals operational or naval characteristics only as it is calculated for operational formations and naval equipment.

B. SOVIET THEORY OF NAVAL OPERATIONAL ART

A picture of the Soviet theory of naval operational art is constructed in much the same way as a jigsaw puzzle. Citations from the SME and MED combine with Soviet books and naval articles to develop a images of Soviet military, operational and naval theory. The principles of Soviet military art operate on the forces and means which combine to conduct military action. Figure 4 attempts to show how these principles are focused in order to be applied in the naval operational context. It is the resulting system of views which then makes up the Soviet theory of naval operational art.



A primary theoretical undercurrent runs through the Soviet theory of naval operational art. Successful naval action is statistically dependent upon naval

forces exhibiting characteristics as defined by the principles of military art. These principles, in order to be effective, must reflect the unchanging laws of armed conflict. The key to understanding the Soviet theory of naval operational art is to study how the general principles of military art are projected into the naval combat environment.

The principles of initiative, combat activeness and moral-political conditioning describe characteristics of combat personnel. These principles, therefore, possess no special operational or naval characteristics. The principle of combat effectiveness refers to the weaponry of the opposing forces and is uniquely naval only in that naval equipment varies from the weaponry of other Soviet services.

The principles of combat readiness and capability, troop control, surprise, massing of forces and means, deep operations and maneuver apply to opposing naval forces and means in specific combat situations. Operational principles are used in the Soviet employment operational formations. Soviet naval principles appear because specific features of the combat environment at sea are so different from combat on land.

The specific features of the naval combat environment appear to reflect a Soviet naval theory of sea denial. The fact that naval formations do not seize territory implies that the Soviets do not consider control of oceanic zones as vital to Soviet interests. The concentration of Soviet naval forces so as to destroy heavily defended enemy targets suggests a counterforce view of naval warfare. Perhaps the basis of this Soviet theory is that no features of naval terrain exist which make one zone of the ocean easier to defend or another better for attack. If no advantageous terrain exists, then all terrain is equally

good. The primary exception to this would be the naval strait. The fact that enemy naval forces are geographically constrained while transiting straits makes them more vulnerable to attack.

Admiral Chernavin lists what he feels to be "the most essential features, connections, and relationships" of naval art in an article called, "Selected Categories of the Naval Art." [Ref. 35:pp. 26-33] Chernavin chooses the following as the most important categories of naval action:

- Combat readiness;
- Surprise, with special emphasis on radioelectronic combat (electronic warfare) and naval reconnaissance;
- Coordination;
- Maneuver;
- The increasing importance of accomplishing missions within a specific time segment ;
- Decisive naval action or battle; and
- Strike, particularly important in naval operations because of the range and power of modern cruise missiles.

In creating this list, Chernavin refers not just to operational art, but to the entire scope of naval action. Combat readiness, surprise, coordination and maneuver are principles of military art. Time is a characteristic reflected in the strategic missions received by Soviet naval fleets as well in operational and tactical missions constructed for fleet forces. Battle and strike are forms of combat action. These are the characteristics which Chernavin is telling the Soviet Navy to concentrate on in the preparation and execution of naval action.

The Soviet theory of naval operational art cannot be divorced from the Soviet theory of military art. The specific naval characteristics of these principles dominate the content of operations conducted independently by the

Soviet Navy. In combined operations, the naval features of these principles only apply to the portions of the operation which require the conduct of naval action. The conduct of combined operations will depend much more heavily on the theory of operational art of the dominant service. (In many cases the Soviet Army.)

It is not enough to know Soviet theory to understand the conduct of Soviet naval operations. One must study how these principles are applied. As mentioned before, the Soviet concept of troop control governs the activities of preparing and executing operations. Chapter III discusses how these principles are shaped into a Soviet naval operation.

III. THE PREPARATION AND CONDUCT OF SOVIET NAVAL OPERATIONS

How does a Soviet operational commander accomplish his assigned strategic mission? In independent naval operations, the Soviet fleet commander is responsible for the plan since he is the senior operational naval commander. The same process of planning, though, can be used by a flotilla or squadron commander. In combined operations, there are two possibilities. If the Soviet Navy is responsible for the plan, then the naval commander prepares and executes the plan. The supporting service only contributes to planning pertinent sections of the operation. When the navy is playing a secondary role in a combined operation, the other service dominates the planning. The navy assists in planning only the naval sections of the operation.

A. METHODOLOGY

Descriptions of how the Soviet ground forces prepare for operations have greatly aided in this research. Recent reports [Refs. 58 & 59] reveal how operational planning for Soviet combined-arms front operations were taught at the Voroshilov Staff Academy in the mid-1970's. The Soviet book, Fundamentals of Tactical Command and Control [Ref. 60] also describes the Soviet process of planning, albeit primarily at the tactical level. In order to discover if Soviet naval planning imitates Soviet ground planning, articles from Morskoy Sbornik have been consulted.

Soviet naval articles describe a planning process nearly identical to that of Soviet ground forces. Soviet Admirals Babiy [Ref. 61] and Smirnov [Ref.

62] both describe the basic sequences of planning outlined in this chapter. The role of the operational commander, the sequence of activities performed by the staff, parallel and sequential planning are all similarly described by Soviet naval and ground military literature. Unfortunately, Morskoy Sbornik articles do not describe the planning process in as great a detail as the ground sources available to the author. This research, therefore combines the two sources in order to develop a more complete illustration of the naval planning process.

Two observations serve to support this approach. First, the Soviet process of naval planning is based upon the theory of naval troop control. As described in the preceding chapter, naval troop control is merely the application of the general theory of troop control to the naval environment. Since both the ground and naval planning processes evolve from the same theoretical base, it is logical that there would be many similarities. Second, the unified Soviet military structure must be able to conduct military planning in three general operational scenarios. The Soviet Navy, Long Range Aviation and Air Defense Forces plan independent operations; any two Soviet services may coordinate in planning combined operations; or a group of Soviet services may be coordinated by the Army to plan combined-arms operations. The Soviet armed services are better able to cooperate in such a potentially complex planning environment if they all employ a common planning process.

B. PREPARATION OF INDEPENDENT NAVAL OPERATIONS

The Soviet fleet commander begins preparations for a specific operation upon receipt of a strategic mission from the Soviet General Staff.

This directive specifies the objective(s) of the mission, the time of commencement and the time by which the objective(s) must be achieved. [Ref. 58:pp. 12-13] The fleet commander immediately begins to "clarify the mission." Clarification occurs as the fleet commander begins to understand how the operation of his fleet will fit into the overall strategic operation of the General Staff. [Ref. 58:p. 18] The fleet commander must understand the goal of the operation. The success of the operation will be judged by the fleet commander's ability to achieve that goal. [Ref. 63:p. 23] Figure 5 illustrates this transition of strategic goal into naval operation.

Strategic Goal: Prevent the enemy from striking the Soviet homeland with nuclear weapons.

Strategic Mission: The Soviet Northern Fleet is ordered to destroy enemy aircraft carriers capable of launching nuclear attacks before they reach their potential launch points in the Arctic TSMA beginning on ...

Independent Naval Operation: Coordination of submarines, naval aviation, and surface combatants to destroy enemy carriers before they reach their launch points. Deployment will begin on ...

Figure 5. Example of Transition from Goal to Operation

The mission received by the Soviet fleet commander establishes geographical boundaries for the conduct of the operation. An independent naval operation is conducted in an oceanic TSMA within a "zone of operations." [Ref. 64] This zone is a purely naval Soviet term. The location and size of the zone is determined by the various military and political factors which are analyzed by the Soviet High Command in the development of strategic missions.

The fleet commander's mission also assigns temporal boundaries. Based upon the time limits defined by the General Staff's orders, the fleet commander's chief of staff prepares a timetable establishing when each phase of the operation plan is due. [Ref. 65] The timetable is used to scientifically organize the staff's work for maximum efficiency. Norms are established which define how long each step of the planning process should take. If no norms have been established, the chief of staff may calculate the expected time required by combining his staff experience with the use of probability theory [Ref. 60:pp. 139- 40].

$$T_{\text{exp}} = \frac{(3T_{\text{min}} + 2T_{\text{max}})}{5} ; \quad \sigma^2 = 0.04 (T_{\text{max}} - T_{\text{min}})^2$$

T_{min} - minimum expected time

T_{max} - maximum expected time

T_{exp} - expected duration

σ^2 - standard deviation

Norms are determined and calculations are performed in advance of actual operational planning. The Soviet chief of staff need only review a standard timetable and adapt it to the current situation. When the chief of staff is done, the commander approves the timetable and preparations for the operation begin in earnest. A sample timetable is shown in Figure 6.

If the operation will be commencing shortly, then the fleet commander may choose to transmit a warning order to his subordinate forces so that they too may begin final preparations for combat action. In particular,

Approved:
 Commander _____
 (rank, last name, date)

PLAN FOR PREPARATION OF THE OPERATION

(name of formation) from _____ to _____

Time mission received _____ Time ready for the attack _____

Sequence numbers	Measures	Time frames for Accomplishment	Executive Agents	When Accomplished
1				
2				
3				
4				

Chief of Staff _____
 (rank, last name)

Figure 6. Timetable for Preparation of the Operation

[Adapted from Ref. 60:pp. 128-129]

subordinate forces would be ordered to cancel all leaves and recall all personnel. Each unit would be ordered to maximize its combat readiness paying particular attention to ammunition levels, combat stores, fuel and other supplies. [Ref. 58:p. 21]

With the mission received and the forces alerted, the fleet commander and his staff now split the process of preparation into two phases, each containing several steps. In the first phase, the fleet commander makes his decision on how the operation shall proceed. In the second phase, the staff performs the detailed planning necessary to implement the commander's decision. When these two phases are complete, the operation plan is established and the fleet staff's duty becomes ensuring that the commander's plan is executed properly.

The staff's first task is to present the fleet commander with an estimate of the situation. This operational situation report describes the naval combat environment developing within the assigned zone of operations over a specified period of time. [Ref. 66] The chief of reconnaissance begins the briefing by presenting an estimate of the enemy [Ref. 58:pp. 22-26]. This estimate describes the location, strength, state and combat capabilities of known enemy units [Ref. 67]. The chief of reconnaissance classifies the quality of his information as either reliable, probable, doubtful and spurious [Ref. 68].

Following the briefing on the enemy, the chief of operations presents an estimate of friendly forces. The fleet commander is reminded of the location, strength and combat capability of the naval forces under his command [Ref. 67]. Included in this presentation are calculations on how long it will take to bring the subordinate forces to a required level of combat readiness. This combat readiness is partially determined by multiplying the total number of pieces of fleet military equipment by a readiness coefficient [Ref. 69]. These readiness coefficients quantify the

reliability of various types of materiel. These measures of reliability are largely determined by the amount of operating time on the equipment [Ref. 70].

The final briefing presents the meteorological and geographical conditions within the zone of operations. The information in these briefings is presented on charts in significant detail. For example, an ice chart depicting the ice situation within a zone of operations would indicate the boundaries of floe and pack ice, ice types and forms, ice density, age, thickness, degree of hummocking and disintegration, dimensions and locations of polynyas, leads and current holes, and direction of the ice field drift [Ref. 71]. Charts depicting the navigational, hydrographic, hydrometeorological, hydrologic, geographical, ice and mine environment are all periodically updated and maintained at the disposal of the fleet commander [Ref. 67]. To interpret this information, the fleet staff begins calculations on the correlation of forces and means [Ref. 58:p. 27].

The naval correlation of forces and means is constructed with the goal and the mission of the operation in mind. In other words, the correlation is more than just a raw comparison of numbers. The Soviet's construct the correlation in order to measure their ability to achieve combat superiority over the enemy in a given situation [Ref. 72]. Sometimes the correlation will be direct. For example, in analyzing submarines attacking submarines, the ratio of friendly to enemy submarines in a given area would be measured to determine the likelihood of success. When the opposing forces are not identical, then the correlation must take this into account. The effectiveness

of an cruise missile attack on enemy carriers would be measured against the enemy air defense strength.

The correlation of forces and means also attempts to take into account qualitative differences between friendly and enemy forces. [Ref. 72] These quantitative and qualitative variables are then simplified into usable mathematical expressions. For instance, the correlation between two weapons systems might be modeled as: [Ref. 73]

$$\text{Correlation of Forces} = \frac{N_1}{N_2} \sqrt{\left\{ \frac{P_1 n_1}{P_2 n_2} \right\}}$$

N - Number of weapons platforms
P - Probability of single shot kill
n - Maximum rate of fire
1 - Friendly forces
2 - Enemy forces

The Voroshilov material demonstrates that the quality of equipment, the level of training, the amount of supplies can mostly be reduced to a single numeric factor [Ref. 59:pp. 1-2]. A U.S. cruiser may be given a quality factor of .8 or 1.2 depending on the Soviet's estimation of the cruiser's combat capability relative to a Soviet cruiser. These quality factors are used to adjust the numerical correlation.

Nuclear and conventional weapons are treated differently by the Soviets in the correlation of forces and means. The use of traditional conventional weapons in armed conflict slowly shifts the overall correlation. During conventional conflict, the operational commander is able to continually monitor and react to changes in the correlation. Nuclear

weapons, however, are capable of causing rapid shifts in the correlation of forces and means. With nuclear weapons, the operational commander cannot effectively monitor the shift as it occurs but instead must compare the post-nuclear exchange correlation to the pre-nuclear situation. [Ref: 74]

The presence of enemy nuclear weapons affects the conduct of Soviet operations whether or not nuclear weapons are being used. In both cases, Soviet combat efforts concentrate on destroying enemy nuclear means. This is necessary in order to influence the post-nuclear exchange correlation of forces in case the enemy decides to escalate. [Ref. 74]

The Soviet's naval correlation differs from the ground correlation in that the naval does not measure the capture of enemy territory. Soviet ground correlations measure the density of enemy forces over a given width and depth of the battlefield [Ref. 58:pp. 22-24]. The naval correlation measures the strength of opposing military forces within an operational zone [Ref. 72].

The fleet commander analyzes the correlation of forces in order to determine how to organize his formations. The Soviets believe that a certain ratio of superiority will create the necessary conditions for successful attack. For example, Soviet front commanders attempt to achieve a superiority of 3:1 over defending enemy units. [Ref. 59:p. 1] Similar norms are likely created within the Soviet Navy. If the Soviet commander cannot achieve the required ratio of superiority over the enemy forces in their entirety, then the fleet commander must consider how to attack the enemy forces a portion at a time. The fleet commander's conclusions regarding

the conduct of forthcoming operations are called the concept of the operation. [Ref. 61:p. 28] This broad term encompasses: [Ref. 75]

- The direction or main axis of attack and other thrusts;
- The sequence and methods of combat action;
- The procedures for the delivery of conventional and/or nuclear strikes;
- The required force groupings and their tactical order of battle.

The fleet commander's concept is used to develop several alternatives. Analyzing these alternatives or "substantiating" the commander's decision is the second step in this first phase of Soviet planning. [Ref. 61:p. 28] In this phase, the fleet staff employs mathematical analysis to examine the various alternatives in terms of combat effectiveness. Criteria are established by which to measure the desirability of the options under consideration such as: [Ref. 76]

- probability of destroying the desired target;
- maximum (minimum) expected damage with specified probability;
- time required to accomplish mission.

Several analytical techniques are deemed useful by the Soviets in examining these criteria.

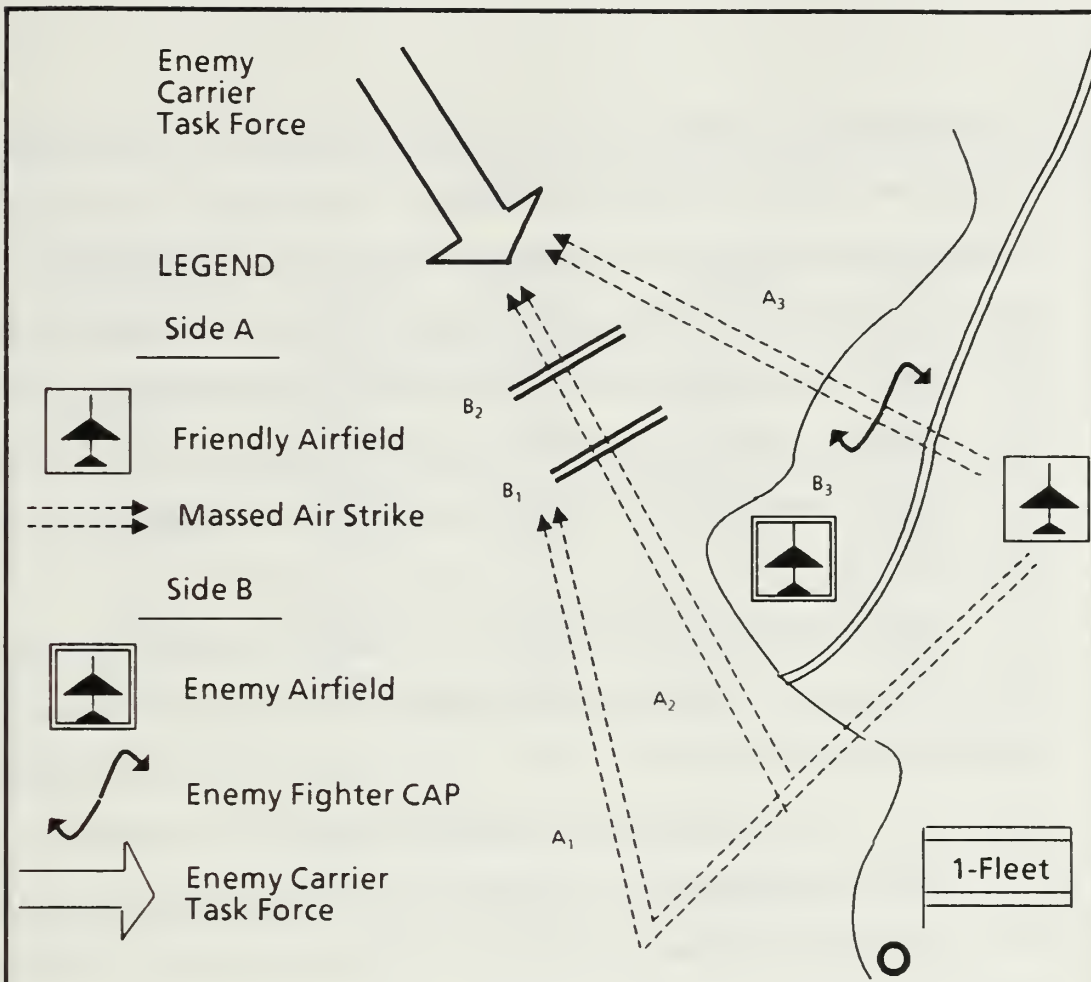
Probability theory is used to forecast the effectiveness of various search techniques. Captain-Engineer Alekseyev describes the development of tables which capture the statistical relationships of search and detection for staff use. Alekseyev's procedures measure the probability of successful search by comparing the area to be searched with the searching forces. These calculations can be used to determine the number of search forces

required to achieve a desired probability of detection or the process can be reversed producing an expected probability of detection. [Ref. 77]

Queuing theory is employed to model the effectiveness of various air defense and ASW missions [Ref. 78]. Queuing theory studies the process of servicing arriving units with a specified number of servers. Two critical variables from the standpoint of ASW and air defense are the number of servers (ASW/air defense teams) and service time (time required to destroy the enemy unit). Logically, the total service given (total number of enemy units destroyed) increases as the number of servers increase and the service time decreases. Depending upon how the Soviets model the ASW or air defense process, queuing theory equations provide predictions of engagement rate and the probability that enemy forces will penetrate the defense.

Game theory decision matrices also aid the Soviet commander in evaluating the combined effects of enemy and friendly alternatives. A 1979 Morskoy Sbornik article uses game theory to "substantiate" alternatives in planning an air strike to destroy an enemy aircraft carrier. [Ref. 79] In the article, the staff presents the commanding officer of a fleet naval air group with a decision matrix to aid in determining the best alternative for the air strike. Figure 7 illustrates the scenario used by this article.

The final step in the decision-making phase begins as the staff presents their analyses to the fleet commander. The commander bears the ultimate responsibility for the success of the operation. He recognizes that scientific aids do not address all of the qualitative aspects of warfare. The commander makes his decision by choosing one alternative from the group



Side A: ALTERNATIVES

A₁ Skirt enemy CAP without refueling

A₂ Skirt enemy CAP with refueling

A₃ Penetrate enemy CAP

Side B:

B₁ Launch light attack aircraft at maximum range

B₂ Launch all aircraft at maximum range for heavy bombers

B₃ Launch all aircraft at light bomber range and refuel at friendly airfield

MISSION: Destroy enemy A/C carrier

[Effectiveness measured by % of damage avoided by ground targets]

GAME THEORY MATRIX

	B ₁	B ₂	B ₃
A ₁	0.85	0.30	0.05
A ₂	0.70	0.60	0.20
A ₃	0.50	0.40	0.30

Figure 7. Game Theory in Support of the Commander's Decision [Adapted from Ref. 79]

of alternatives analyzed. This selection represents the commander's judgment, combining both experience and analysis, on the basic requirement necessary for fulfilling the fleet's assigned mission. [Ref. 79:p. 21] The fleet commander's decision assigns missions to the forces and gives instructions for their preparation. The staff then begins the second phase of the preparation process, the detailed planning necessary to implement the commander's decision. This second phase is called planning the operation. [Ref. 62:p. 20]

The detailed planning of a Soviet naval operation consists of preparing several important planning documents. First, the staff plots the commander's decision on a chart. This becomes the chief regulating document for guiding the subsequent development of the operation. [Ref. 62:p. 20] This chart or map is updated as the detailed planning proceeds and is the single document which most reflects the content of the entire operation.

A second set of documents is the coordination plan. These documents specify how individual forces are supposed to coordinate in order to complete their assigned missions. The coordination plan specifies the principal missions, the sequence of their execution, the missions of each subordinate force in place and time. Attached to the coordination plan are several documents which specify the communications requirements, procedures for mutual identification and recognition, target designation and special control signals. [Ref. 80]

The third set of documents are the plans for operational combat support. These documents specify which fleet assets are tasked to provide

Subordinate Forces				
Phases of the Operation	Group A (Ships)	Group B (Subs)	Group C (Aircraft)	Group D (PVO)
Phase 1 Day 1 - 3	Mission: Time Place	Mission: Time Place	Mission: Time Place	Mission: Time Place
Phase 2 Day 4 - 6	Mission: Time Place	Mission: Time Place	Mission: Time Place	Mission: Time Place
Phase 3 Day 7 - 9	Mission: Time Place	Mission: Time Place	Mission: Time Place	Mission: Time Place

PVO - Air Defense Forces

Figure 8. Sample Coordination Plan

[Adapted from Ref. 64.]

combat or combat service support for the operation. For each type of support, a chart is drawn up identifying each support mission, the assigned forces and the method of conducting the planned support action. These charts or maps are all based on the commander's operation plan. [Ref. 81]

Two such documents are prepared for the organization of deception and the movement and delivery of combat supplies. Deception (*maskirovka*) is a category of operational (combat) support. Depending upon the commander's decision, the deception plan coordinates the accomplishment of diversionary actions, the simulation of force concentrations and the dissemination of false information to the enemy

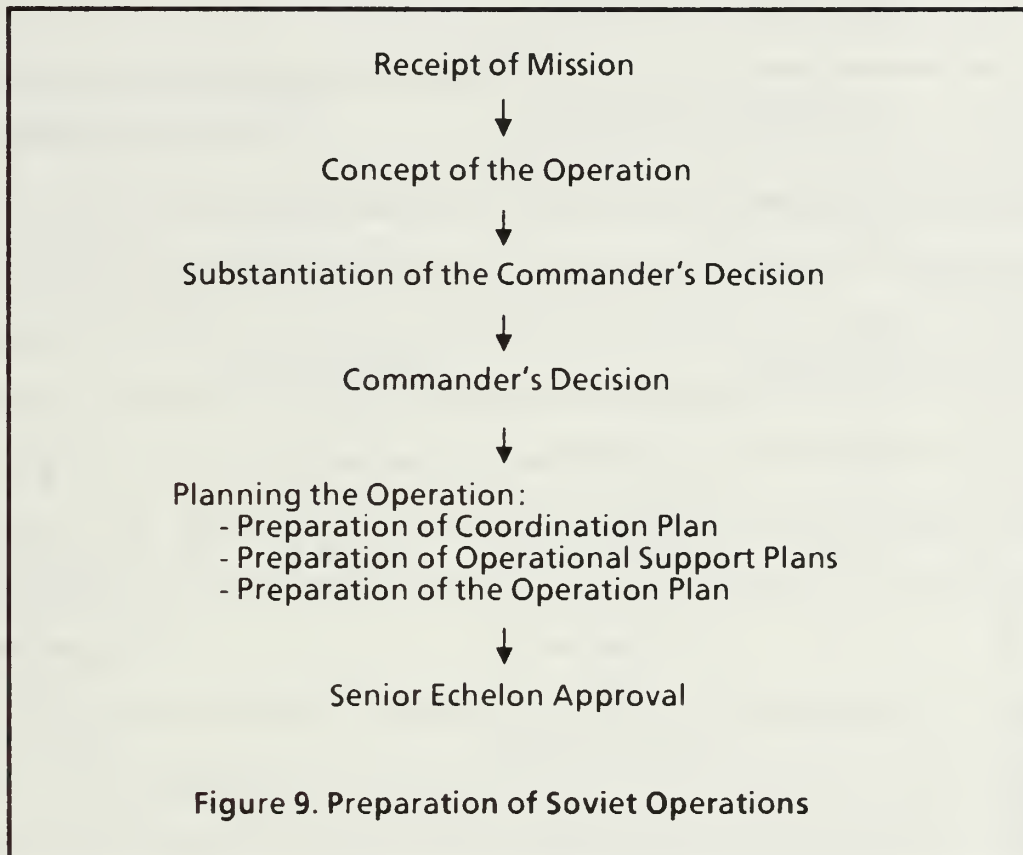
regarding the combat readiness of Soviet forces and the likely character of forthcoming combat actions [Ref. 82]. The logistic plan establishes procedures for the delivery of operational supplies to fleet units. The delivery of these supplies is prioritized to ensure that the main force grouping is well prepared for combat [Ref. 83]. These operational supplies are maintained at bases and depots by the Soviet Rear Services and are constantly at the disposal of the fleet commander. Day to day operations do not consume these operational supplies, instead use a second set of supplies called expendable supplies. [Ref. 84]

When the detailed planning is completed and approved by the chief of staff and fleet commander, an operation order is fashioned which contains: [Ref. 85]

- Estimates of the enemy;
- Missions of the fleet;
- General plan of operations;
- Missions and sequence of weapons employment by senior command echelons in the zone of operations;
- Missions of adjacent units and established boundaries;
- Missions of subordinate force groups;
- Composition of supporting forces;
- Composition of reserve forces;
- Time schedule for the operation; and
- Location and time of control facility deployment.

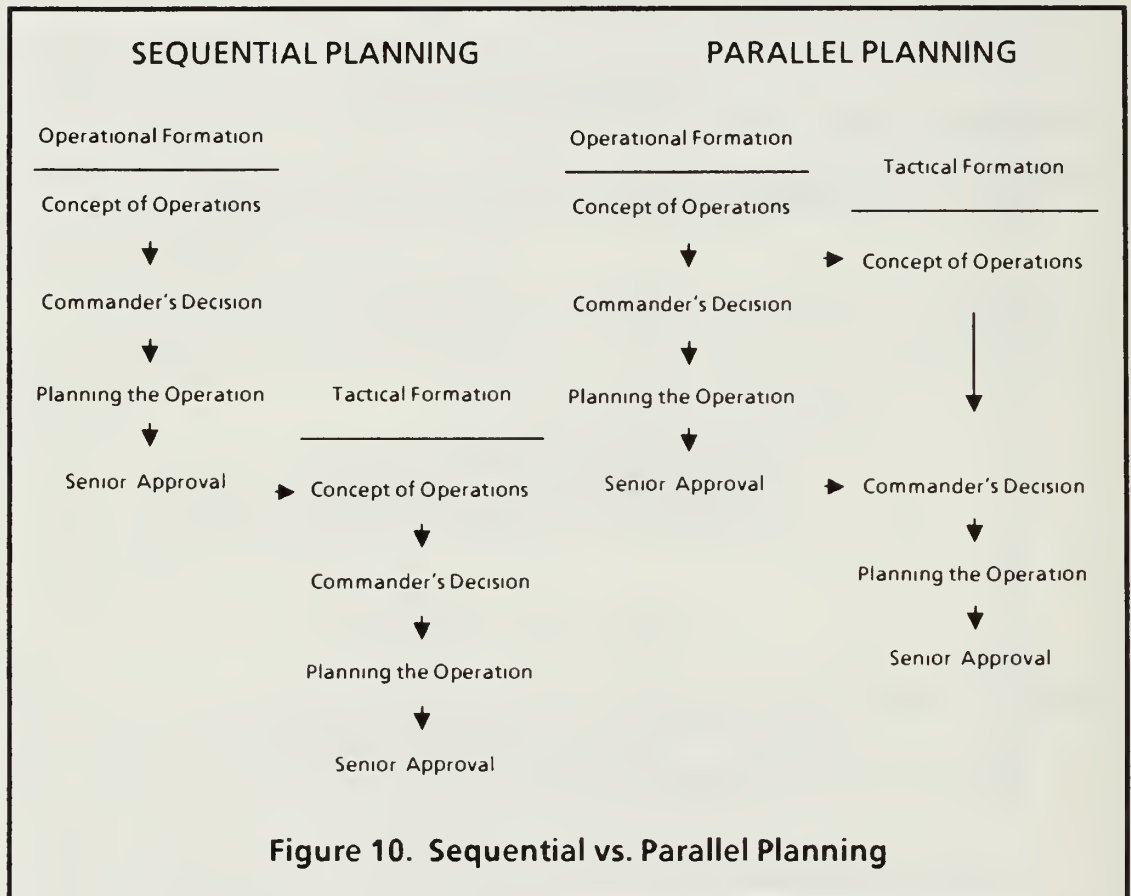
This entire plan is then submitted to the next senior echelon in the chain of command for approval. In the case of the fleet commander, this would be the General Staff's fleet representative or the continental TSMA

commander. Upon receiving approval from his superiors, the fleet commander then transmits his orders to his subordinate fleet forces. [Ref. 62:p. 19] This process of preparation is summarized in Figure 9.



The Soviets believe that the planning of operations must be completed quickly and efficiently in order to maximize the time left for subordinate forces to prepare. Traditionally, the fleet commander waited for his superior's final approval before transmitting orders to his fleet. This is called the successive method of planning. In order to save time, the Soviets have developed a parallel method of planning. In parallel planning the subordinate forces conduct their tactical planning based upon the

operational concept of the fleet commander. Figure 10 compares these two planning methods. When the fleet commander's plan is approved, then they can complete their plans and submit them for approval to the fleet commander. [Ref. 62:pp. 19-20]



C. PREPARATION OF COMBINED OPERATIONS WITH NAVAL PARTICIPATION

As stated earlier, the planning of a combined operation is dominated by one of the two services involved. This stems from an important principle of Soviet troop control which requires that a single commander exercise centralized control over an operational plan. [Ref. 60:pp. 122-123] That

single commander must make timely decisions and take full responsibility for the conduct of the operation. This centralization of control is balanced with the need for initiative (decentralization) in a quickly changing naval combat environment. Therefore the degree of centralization must be determined on a case by case basis.

The Voroshilov Academy material describes how a naval fleet commander would support the operational commander of another service in executing a combined operation. A naval assault operation (amphibious landing) is generally organized under the operational command of an Army front. A naval task force is placed under the command of the Army front with the naval commander acting as assistant front commander for naval affairs. [Ref. 86:p. 10] The naval commander's role is to assist in the preparations of the portions of the front commander's plan which are purely naval.

When the combined operation is under the command of a naval commander, the positions are reversed. The commander of the supporting service aids the naval operational commander in reaching his decision. Once the naval commander's decision is made, the supporting service commander assists in the detailed planning.

In either case, the activities of planning are carried out as described in the previous section on independent planning. The Soviet process of planning appears to be identical regardless of service. When it is modified, it is to fit the situation not the service.

D. CONTROLLING THE EXECUTION OF NAVAL OPERATIONS

Soviet troop control agencies govern not only the preparation, but also the execution of Soviet operations:

It is important in this case that the subordinate commanders know and constantly feel that they are not alone in combat. Placing his confidence in them, the senior commander constantly follows the progress of the battle and can at any time render them assistance with all the resources available to him. However, this assistance is possible only when the senior commander knows the progress and results of his subordinates' performance of their tactical mission. Hence, the unquestionable requirement: "Delegate and follow up." Still, this following up is not an extraordinary measure calculated to "catch" or "expose" someone. His primary and "more complex task is to check the correctness of the work ... check the system of organization of operations, to ensure the greatest productivity in the operation..." [Ref. 60:p. 297]

This quotation comes from the Soviet book on tactical troop control. Substitute the words "operation" for "battle" and "operational" for "tactical" and it could well apply to Soviet operations. The Soviet operational commander monitors the progress of the operation by measuring the success achieved by his subordinates in completing assigned operational missions.

The fleet commander controls the execution from his fleet command post. This command post is a specially equipped and protected structure from which the fleet staff can exercise control of subordinate forces [Ref. 87]. An alternate command post is established and remains in constant communication with both the fleet command post and subordinate fleet forces [Ref. 88]. Both of these command posts are usually located at the main fleet base [Ref. 89].

The fleet commander uses an operational situation map and the correlation of forces and means to monitor the progress of the operation.

This situation map use symbols to display the most recently received combat information for the fleet commander. [Ref. 90]

The commander and his staff continually interpret this information with the correlation of forces and means. The Voroshilov Academy material explains how this correlation is used:

At the operational level the staff is continually updating the projected correlation of forces expected to occur at the various phase lines such as that for the various expected lines for enemy counterattack. If they foresee something turning out unfavorably they will immediately take steps to alter the correlation by changing the plan in the least disruptive way. They will give the new predictions to the commander. According to most norms the plan will try to establish a three to one ratio in forces at the critical phase lines. If the expected ratio is down to two to one during part of the battle and on part of the field that may be acceptable, but below two to one will trigger some sort of revision. [Ref. 59:p. 3]

As described earlier, the conventional and nuclear correlation of forces and means are quite different. Yet, the Soviets believe that the operational plan must prepare for both nuclear and conventional warfare [Ref. 91] For the Soviets, it cannot be predicted with certainty when the enemy may chose to introduce nuclear weapons. The Soviet fleet commander's use of the nuclear correlation is not described in Soviet naval articles; but, the fleet commander's concern for the effects of nuclear escalation can only be satisfied by constantly monitoring a post-nuclear exchange correlation of forces. In this way the fleet commander is able to continuously monitor the effects of a possible nuclear escalation during the conduct of conventional operations.

Implicit in any Soviet post-nuclear correlation would be the mission assignment of enemy targets to Soviet nuclear capable units. Without using nuclear targeting information, the nuclear correlation could not accurately evaluate the destruction of friendly and enemy units, disruption of

communications and movement of combat units. These changing characteristics in the combat situation must be constantly incorporated into the nuclear correlation for it to have any immediate value to the fleet commander. In this sense, the nuclear correlation becomes in effect a nuclear exchange simulation which is continually updated with combat information. This postulated use of the post-nuclear exchange correlation of forces, though, is useful in explaining two characteristics of Soviet operations.

The Soviet fleet commander is inordinately concerned with the destruction of enemy aircraft carriers before they reach their potential launch points. Even in the context of conventional conflict, Soviet operational commanders make this a requirement. If the Soviet commander is monitoring a post-nuclear exchange correlation of forces, then as enemy aircraft carriers capable of launching nuclear strikes close within range of Soviet targets the nuclear correlation shifts in favor of the enemy. The Soviet commander, therefore, is acting so as to maximize both the conventional and nuclear correlations by requiring the destruction of enemy carriers before they reach their launch points.

The Voroshilov Academy material provides a second justification for this use of the post-nuclear exchange correlation. The Soviets always prepare nuclear strike plan regardless of whether the operation is to be conventional or nuclear. This strike plan assigns nuclear missions to Soviet nuclear capable units. [Ref. 86:p. 13] The Soviet fleet commander needs some way to monitor the effects of conventional battle on the nuclear strike

plan. The postulated post-nuclear exchange correlation would fulfill just such a role.

E. SUMMARY

The Soviet theory of naval operational art produces principles which the Soviet fleet commander believes must be used to achieve success in naval operations. Soviet troop control takes these theoretical principles and develops practical applications which bring the operation into existence. The theoretical elements of this plan are combined with up to date information on the combat situation. The fleet commander's sole purpose in preparing the naval operation is to create the conditions for success when Soviet naval forces engage in combat.

The activities of Soviet naval operational planning are designed to help the fleet commander fabricate the operational plan. The naval correlation of forces and means measures to what extent the massing of Soviet forces can achieve superiority over the enemy. The coordination plan breaks the operation down into its component tactical segments and assigns specific missions which coordinate the actions of Soviet forces. The plans for deception, reconnaissance, antimine, air defense and logistics ensure that Soviet forces entering combat have received the benefit of well organized combat support.

The Soviet desire for combat readiness affects the Soviet fleet commander in several ways. First, the entire process of planning naval operations must be completed as rapidly as possible in order to maximize the time available for preparing naval forces for battle. Second, because of the use of readiness coefficients which measure the readiness of naval

equipment, the fleet commander will tend to minimize the operating time of his forces when operations are not being conducted.

The Soviet fleet commander also optimizes his combat readiness by keeping his naval forces in close proximity to the theater naval basing system and the zones of anticipated operation. If the fleet commander envisions his probable zones of operation as contained within the seas contiguous to the Soviet Union, then he will develop his naval logistic elements throughout these seas and keep out-of-area naval deployments to a minimum. On the other hand, if the Soviet fleet commander expects to operate in some forward zone of operation, then he must create a logistic structure for that zone and deploy the necessary naval forces in order to achieve some level of combat readiness.

A reading of the Voroshilov Academy material suggests that the Soviet military commander does not divide the spectrum of combat into nuclear and conventional combat. For the Soviets, nuclear weapons have irrevocably altered the nature of all combat. The Soviet operational commander views combat action as being conducted either with nuclear weapons or without.

At the tactical level of naval combat, the difference between nuclear and non-nuclear attack is only a difference of degree as measured by the Soviet correlation of forces. Both conventional and nuclear armed missiles are capable of rapidly shifting the tactical correlation in favor of one side or the other. Admiral Chernavin discusses this situation in his article, "Teach What Will Be Necessary in War":

Never forget that the greater range and accuracy of weapons places a two-fold task before tactical commanders.

On one hand, they have to preempt the opponent in firing, to do which they must master the art of hitting him with the first salvo at optimum range. Otherwise he can succeed in employing his weapons and placing our forces at a disadvantage....

On the other hand, navymen must be perpetually at a high state of readiness to repel unexpected mass enemy attacks with all types of weapons and to maintain the ships' battleworthiness after suffering damage. [Ref. 92:pp. 5-6]

At the operational level, a difference still exists between nuclear and non-nuclear attack. In non-nuclear operations, Soviet naval forces strive to create superiority over the enemy. There is an assumed exchange of weapons and attrition of forces on both sides. In nuclear operations, Soviet forces focus not on superiority but on preemption. Only through first strike can Soviet naval forces win a nuclear war.

Preparations for Soviet nuclear and non-nuclear operations must be combined into a single operational plan. The Soviet fleet commander is tasked with completing a strategic mission. He must be ready to conduct the operation without knowing beforehand if the conflict will escalate to the use of nuclear weapons. The fleet commander must prepare for the eventuality of nuclear escalation by creating a nuclear fire plan and designating actions to be carried out in the event of nuclear escalation. As he monitors the conduct of the operation, the fleet commander observes shifts in both the nuclear and non-nuclear correlation of forces.

One further characteristic of Soviet operational planning is the Soviet desire to finalize the operational plan immediately prior to the conduct of combat action. Contingency plans can be created ahead of time, but they are not sufficient for the conduct of actual operations. The fleet

commander and his staff must review preplanned actions before the operation in order to ensure that the plan conforms to the actual situation.

IV. HISTORICAL EXAMPLES OF SOVIET NAVAL OPERATIONS

Just as Soviet operational art cannot be isolated from Soviet strategy and tactics, so too Soviet naval action cannot be fully examined without considering the conduct of Soviet operations on land. How does the military leadership of the Soviet Union view the naval operation?

In an attempt to look beyond what the Soviets say to see what they do, two naval operations from World War II have been selected from Soviet literature. The first is a 1942 anti-SLOC operation conducted by the Soviet Baltic Fleet. The second is a riverine operation conducted by the Soviet 15th Army and the Amur Flotilla in the 1945. Manchurian campaign. In each of these situations, the Soviet Supreme High Command elected to employ naval forces in combat. What role did they play in the Soviet conduct of war?

A. 1942 SOVIET SUBMARINE OPERATION AGAINST BALTIC SLOCS

1. Background

After the German surprise attack in June 1941, the Soviet Baltic Fleet was moved from its main base in Tallinn to the ports of Khronshtadt and Leningrad. Khronshtadt was made the fleet's new main naval base. As the siege of Leningrad began in October 1941, the majority of the Baltic Fleet's warships were assigned for the internal defense of Leningrad. [Ref. 93:p. 288]

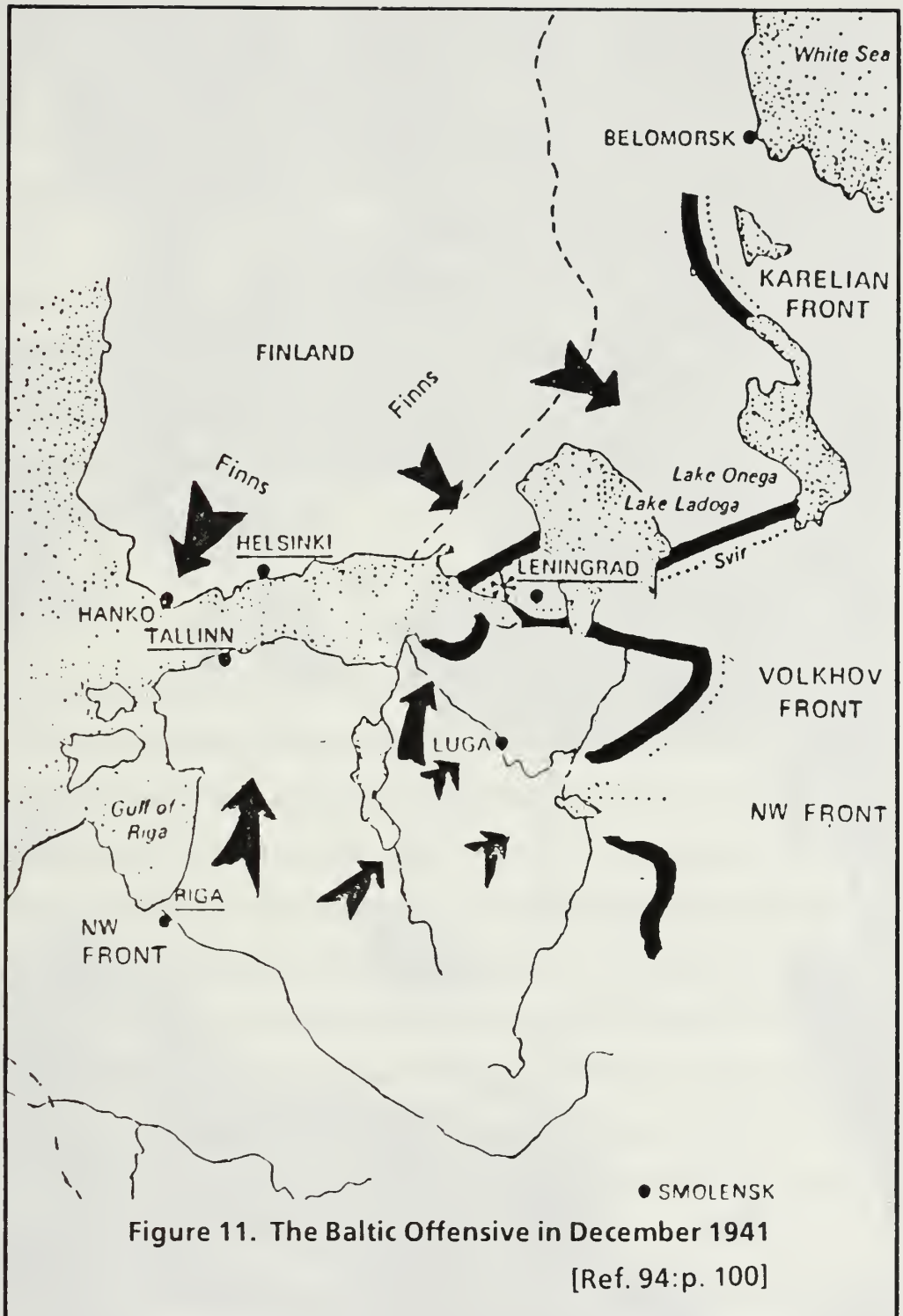
As the Soviet military struggled through the first months of the war, several organizational changes occurred which affected the Baltic

Fleet's chain of command. Joseph Stalin, through the State Defense Committee, became both the People's Commissar for Defense and the Supreme Commander of the Soviet Armed Forces. The General Headquarters of the Supreme Command operated under Stalin's control. The main working organ of the General Headquarters was the General Staff. [Ref. 93:pp. 274-6]

Three strategic sectors were identified after the initial German attack. In each of these three sectors, the State Defense Committee created a High Command for Strategic Sectors. The Baltic Fleet, the Northern Fleet, the Northern and Northwestern Fronts comprised the High Command for the Northwest Sector under the command of Marshal K. Voroshilov. [Ref. 93:pp. 274-6]

At the beginning of 1942, Leningrad was wedged between the German Army Group North to the south and Finnish troops to the north. Leningrad's only link with the rest of the Soviet Union was a road across the ice of Lake Ladoga. Between January and March, Soviet forces south of Leningrad engaged German troops in fierce fighting in the first Soviet winter offensive. [Ref. 94:pp. 242-8] Figure 11 shows the isolation of Leningrad at the end of 1941.

On February 21, in the midst of these Soviet Army operations, the General Headquarters of the High Command formed a special air group consisting of 5 bomber and mine-torpedo regiments and 5 fighter regiments. Their mission was to cooperate with Baltic Fleet aviation to destroy targets along Baltic sea lanes and shoreline. [Ref. 95:pp. 35-36] At approximately the same time, the Soviet People's Commissar of the Navy



issued a directive to the Soviet fleet's which "emphasized the significance of attacking enemy sea lanes." [Ref. 6:p. 228] This directive was supposedly based upon the general strategic tasks which confronted the Soviet Navy in 1942. As a result of this directive, the Military Council of the Soviet Baltic Fleet issued orders to begin a submarine anti-SLOC operation.

It appears that in February 1942, the High Command designed a strategic operation to disrupt Baltic SLOCs. This is not discussed by Soviet authors, but is instead suggested by the timing of the creation of the special air group and the Baltic Fleet's orders to begin an anti-SLOC operation. It was up to the Baltic Fleet commander to design the submarine operation which would implement this strategic plan.

2. The Operation

As Vice Admiral V. F. Tributs, Baltic Fleet Commander, considered operating against German Baltic SLOCs, several details must have been presented in his staff's estimate of the situation. In the fall of 1941, German aircraft had dropped mines to disrupt seaborne transits between Khronshtadt and Leningrad. Throughout the winter, German forces seized most of the islands in the Gulf of Finland. Several German acoustic-radio detection stations had been established and over 10,000 German mines were deployed. In addition to these fixed defenses, a contingent of German naval forces comprised of small boats and minesweepers were stationed in Finland. [Ref. 95:p. 34] Figure 12 shows the Baltic situation.

On March 14, the Military Council of the Baltic Fleet issued the following operational missions to the Baltic submarine brigade:

- destroy enemy transports and warships in the Baltic Sea;

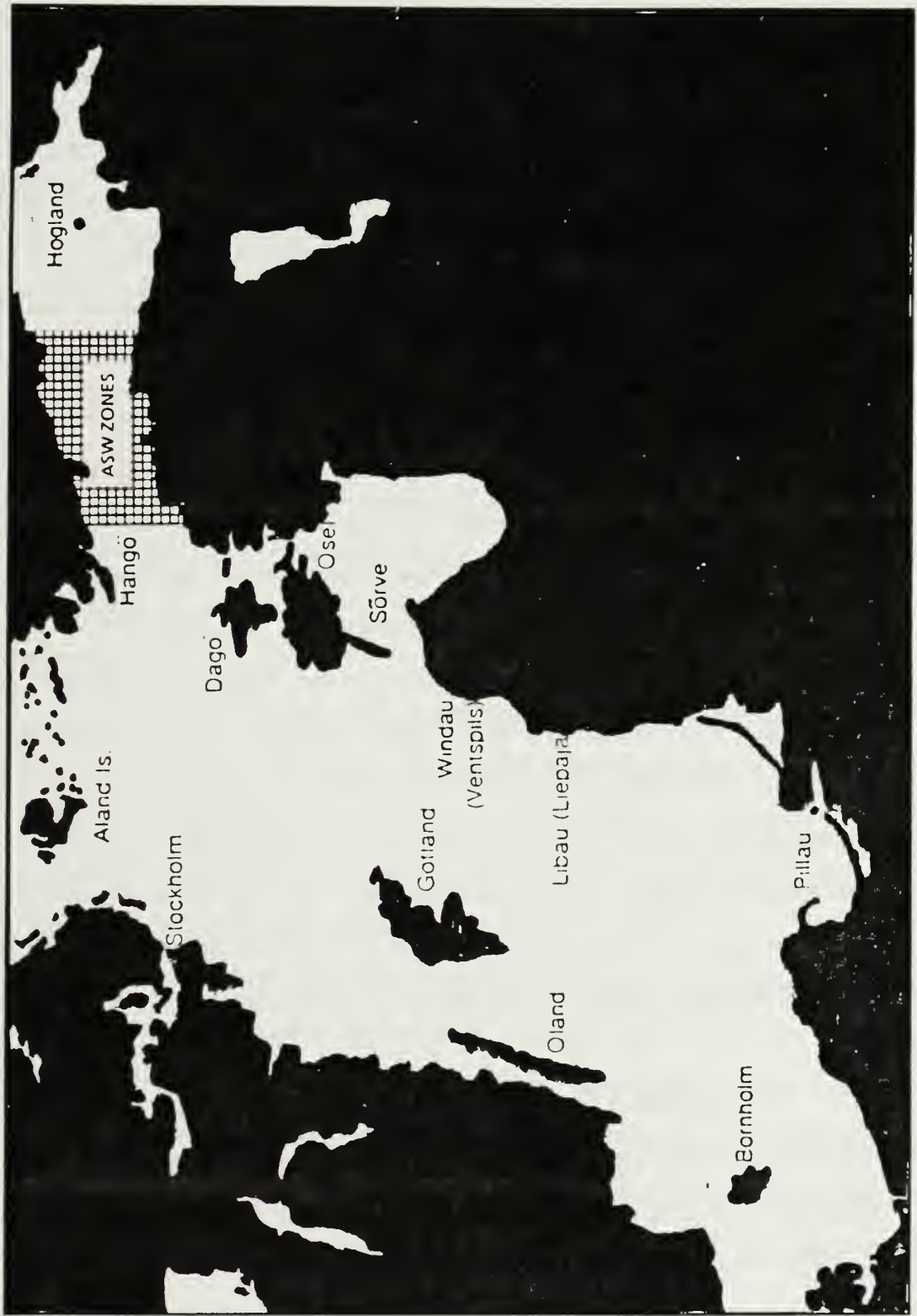


Figure 12. The Baltic

- lay mines on enemy sealanes; and
- determine the sealanes of enemy warships, channels and the character of the enemy ASW system in the Gulf of Finland.

On March 27, the Military Council amended this order adding that enemy warships must be kept out of the Eastern Gulf of Finland. [Ref. 95:p. 35]

Admiral Tributs' decision determined that Soviet submarines would exit the Gulf in three echelons. The first echelon would operate in the Baltic from June to July with two submarines designated to operate solely in the Gulf of Finland. The second echelon was to exit the Gulf upon the return of the first, and operate against German SLOCs from July to August. The third would then exit in mid-September and operate until winter ice precluded further actions. The intent of the operation was to continuously engage German Baltic SLOCs over a period of six months. [Ref. 95:p. 35]

The deploying submarines were to receive escort as far as Hogland island, but then were to transit independently through German ASW positions. The Soviets calculated that the probability of a submarine encountering a mine was between 0.25 and 0.35 [Ref. 6:p. 227]. Upon reaching the Baltic, Soviet submarines would occupy predesignated positions along German SLOCs in order to carry out their attacks. The Soviet call this method of submarine attack the "positional method." [Ref. 95:p. 35]

Throughout April, the Baltic submarine brigade headquarters worked with the headquarters of the Baltic Fleet in order to complete the detailed planning necessary to implement Admiral Tributs' decision. By April 20, several measures of operational support and coordination had been worked out. Baltic Fleet aircraft were to conduct reconnaissance of

the Baltic coastline including the Gulf of Riga and Gulf of Bothnia. Immediately prior to the exit of a submarine echelon, Baltic Fleet aircraft would conduct strikes on enemy patrols and ASW positions in the vicinity of Hogland Island. Available Soviet surface forces were to escort the deploying submarines as far as Hogland Island. Beyond Hogland, the submarines were to transit independently. [Ref. 6:p. 229]

Preparations were also made for Baltic Fleet aircraft to provide targeting information to deployed submarines; however, practical difficulties interfered. The submarine commander had to be surfaced in order to communicate with aircraft. These same submariners were told to operate on the surface only in periods of low visibility. As a result, Baltic Fleet aircraft could only provide targeting data under the worst of weather conditions. [Ref. 6:p. 229]

In addition to preparing these measures of coordination, logistical support was augmented by the formation of special brigades of skilled labor composed of submarine personnel and workers from Leningrad. These brigades were tasked with completing all required repair work before the commencement of the operation in June. [Ref. 95:p. 35]

This Soviet operation did not start smoothly. Throughout May and June, German air forces laid several hundred influence mines near Khronshtadt. In June 1942, the Supreme High Command took direct control of the operations of fronts and fleets [Ref. 93:p. 276]. The special air group was reassigned to support combat to the north. Only Baltic Fleet aviation remained to support the submarine operation, and it was simultaneously

responsible for supporting Soviet ground troops near Leningrad. [Ref. 95:pp. 34-35]

With these problems, the 1st submarine echelon's deployment was delayed until mid-June. Nine submarines in all departed singly or in small groups from mid-June to early July. The Soviets report that this first echelon achieved success by sinking 15 enemy transports. In addition, 1st echelon submarines clarified the Baltic Fleet's estimate of the situation with information on enemy shipping routes and ASW positions. Three submarines did not return. Throughout the operation, coordination between submarines and aircraft was never to be realized. [Ref. 95:pp. 35-36]

Because of its late departure, the first echelon was also late in returning. The Baltic Fleet Military Council determined that the 2nd echelon should not leave until after the return of the first. The Soviets cite several reasons for this decision. First, Soviet surface forces could not accommodate escorting the simultaneous deployment and return of Baltic Fleet submarines. Second, no provisions had been made to prevent attacks by Soviet submarines on each other while passing in the Gulf of Finland. Third, a sudden large concentration of Soviet submarines in the Gulf would increase the probability that German and Finnish ASW positions would detect and attack transiting submarines. These practical reasons are weighed against the theoretical requirement to maintain continuous action against German SLOCs. [Ref. 6:p. 233]

In mid-August, a second echelon of 10 submarines deployed through the Gulf. These submarines transited to Hogland submerged,

escorted by Soviet minesweepers and antisub launches. The second echelon operated simultaneously in separate regions of the Baltic accumulating a record of sinking 16 transports, two destroyers and one enemy submarine according to Soviet sources. [Ref. 95:p. 35]

The People's Commissar of the Navy had been monitoring the progress of the Baltic Fleet operation and ordered the Baltic Fleet to intensify its efforts. Admiral Tributs increased the size of the 3rd echelon from 10 to 15 submarines. In addition, the 3rd echelon put to sea on December 15 without waiting for the complete return of the 2nd echelon. By this time, German and Finnish forces had reinforced their ASW positions by using anti-submarine nets. Soviet sources attribute the 3rd echelon with more sinkings than either of the two earlier echelons. Ice soon forced 3rd echelon submarines to return to port. [Ref. 95:pp. 35-36]

3. Soviet Critique

The Soviet Navy applauds several aspects of this operation. The independent crossing of enemy ASW positions by Soviet submarines is described as an impressively courageous feat. Soviet submarines are said to have sunk 65 transports and warships. Perhaps of more importance, the actions of Soviet Baltic submariners slowed the transport of strategic cargo and the Germans were forced to shift from individual ship crossings to convoys. [Ref. 95:pp. 34-37]

The Soviets also cite several factors which hindered the conduct of this operation: [Ref. 6:pp. 224-241]

- Air support was sporadic. The special air group was reassigned and Baltic Fleet aviation was substantially occupied with support of Soviet ground operations.

- Submarine transits of enemy ASW positions would have benefited from more active support of Soviet aviation and surface forces.
- Using the positional method of attack limited the initiative of Soviet submariners and enabled the Germans to identify some of the positions used by Soviet submarines.

Overall, while the Soviet Navy considers this submarine operation a success, Soviet history in general does not portray this operation as crucial to the Soviet war effort. The book, Basic Stages of the Great Patriotic War, does not even list the operation as one of the important operations of the war. [Ref. 96]

B. 1945 AMUR FLOTILLA SUPPORT OF THE SOVIET 15TH ARMY

In studying the combined operation completed by the Amur Flotilla and the Soviet 15th Army in Manchuria, a unique opportunity presents itself. The recently translated Soviet book, The Initial Period of War [Ref. 97], discusses the strategic operation developed by the Soviet Supreme High Command for the Soviet defeat of the Japanese Kwantung Army. Recall that a strategic operation is a plan developed by the General Staff which assigns strategic missions to fronts and fleets in a given TSMA. The U.S. Army's Combat Studies Institute has published a detailed study of this strategic operation based upon Soviet sources [Refs. 98 & 99]. These works combined with a Soviet naval article describing the actions of the Amur Flotilla [Ref. 100] describe how a Soviet naval flotilla was employed in a strategic operation in World War II.

1. Background

Three months after the defeat of Germany, the Soviet Union declared war on Japan and rapidly opened a new strategic front in the Far East. The initial strategic operation in this theater envisioned the conduct of

three separate actions. The primary task was an invasion of Manchuria. The Soviet South Sakhalin operation and Kurile assault operations were smaller and coordinated with the conduct of the larger Manchurian operation. [Ref. 97:p. 246]

The Soviet High Command developed the following strategic plan for the destruction of the Kwantung Army as shown in Figure 13. The overall concept of the plan called for two main attacks converging on the center of Manchuria in order to divide the Japanese forces. Deep enveloping maneuver was to be used by advancing Soviet forces to quickly defeat the enemy in detail (unit by unit). The assaults on South Sakhalin and the Kurile islands were to depend upon the success of the main operation. [Ref. 97:p. 249]

The overall correlation of Soviet to Japanese forces was generally in the Soviet's favor: [Ref. 97:p. 250]

	Soviet Forces : Japanese Forces	
	<hr/>	
Troops	1.2	: 1
Tanks/S. P. Guns	4.8	: 1
Artillery	4.8	: 1
Aviation	2.5	: 1

(S. P. Guns - Self Propelled Guns)

The Supreme High Command also calculated the correlation of forces along each of the strategic axes of attack: [Ref. 97:p. 250]

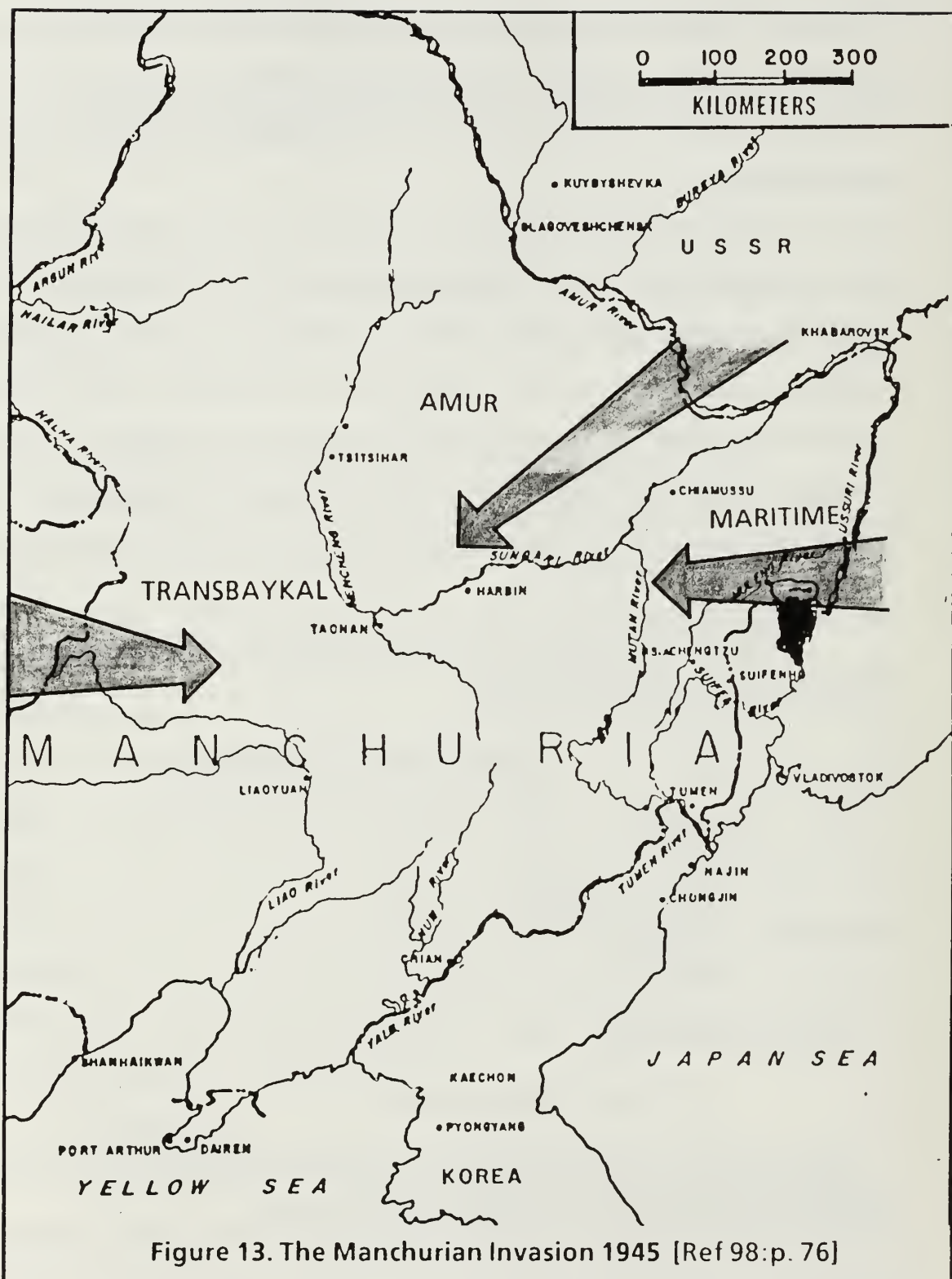


Figure 13. The Manchurian Invasion 1945 [Ref 98:p. 76]

	Transbaykal	Maritime	Amur
Troops	1.7:1	1.5:1	1.4:1
Tanks/S.P. Guns	5:1	8:1	8:1
Guns	8.6:1	4:1	2:1
Mortars	18:1	overwhelming	8.2:1

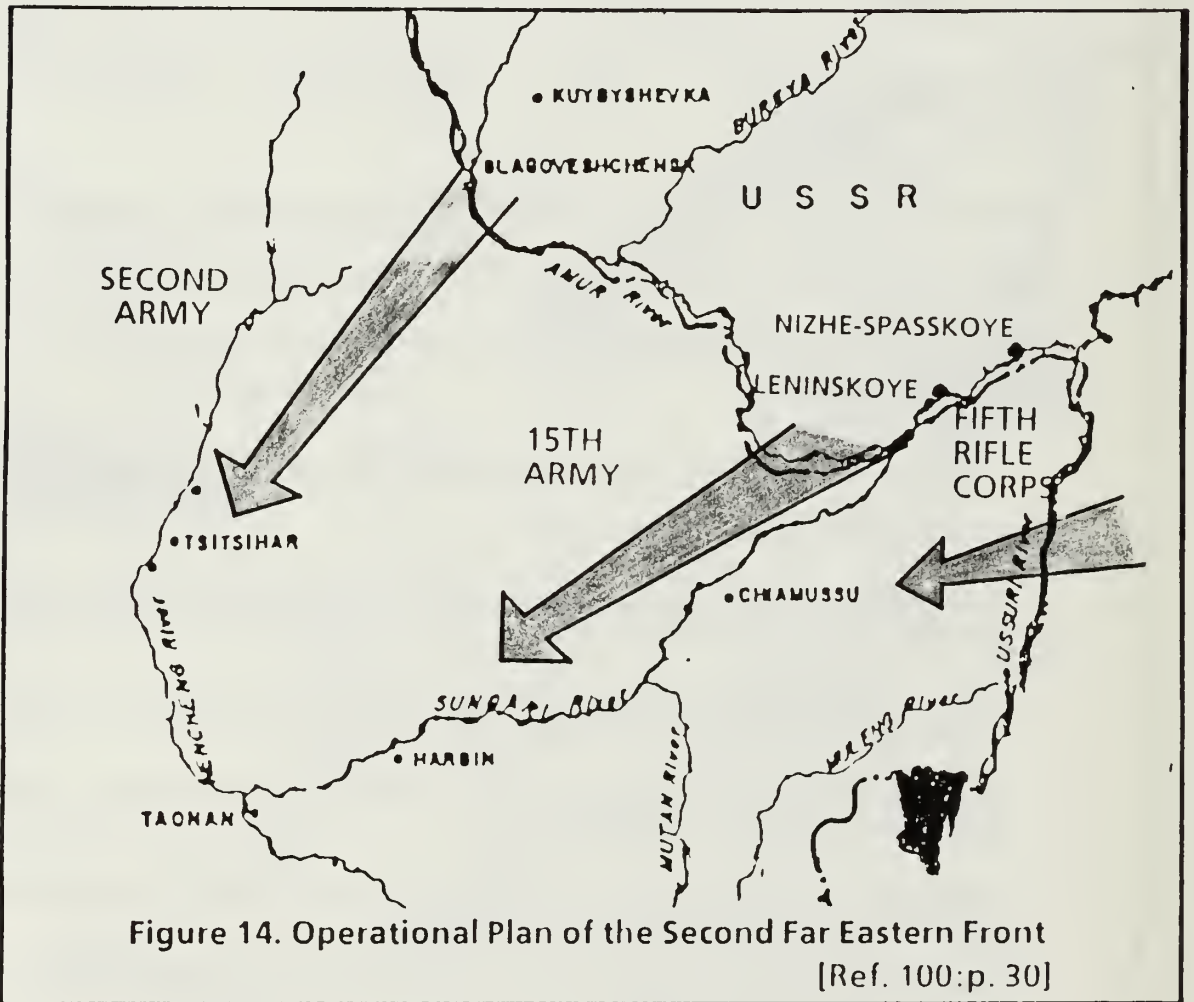
The entire strategic operation would develop across a front of 500 km to a depth of 600-800 km and was to take 20 to 24 days to complete. These figures determined the rates of advance necessary along each of the strategic axes.

The Supreme High Command then developed the strategic missions for the Soviet Far Eastern Forces: [Ref. 97:p. 252]

- Transbaykal Front; split into two echelons and attack across the Greater Khingan Range and disrupt the enemy rear area.
- First Far Eastern Front; breakthrough Japanese defenses, commit the 10th Mechanized Corps to a depth of 100-150 km.
- Second Far Eastern Front; cross the Amur and Ussuri rivers, develop action to an operational depth.
- Pacific Fleet support actions of First and Second Fronts. Amur Flotilla support crossings of Amur and Ussuri rivers.
- Soviet-Mongolian Forces; Cooperate to protect the flanks of First Tank army in Transbaykal Front.
- Air Groups of the Fronts; Enhance surprise by not conducting reconnaissance in advance of combat action. As the attack develops, deliver massed strikes along strategic axes.
- Air Defense Forces; Protect the massing of Soviet troops and major strategic targets in the Soviet tactical rear.

2. The Operation

General M. A. Purkayev commanded the Second Far Eastern Front in 1945. His general plan of attack was to deploy in three separate sectors and achieve three separate axes of advance: [Ref. 98:pp. 149-150] Purkayev's plan is shown in Figure 14.



- Main Operational Axis; 15th Army cross the Amur and Ussuri rivers. Advance and unite with forces from the First Far Eastern Front.
- Supporting Axis; Second Army conduct supporting attack and advance south through Lesser Khingan Mountains.

- Supporting Axis; Fifth Rifle Corps attack across Ussuri to seize Jaoho then unite with the 35th Army of the First Far Eastern Front.
- Amur Flotilla; Cooperate with all armies to coordinate crossings of Amur and Ussuri.

General Purkayev issued the following order to Lt. General S. K.

Mamonov, commander of the Soviet 15th Army:

In cooperation with two brigades of the Amur Flotilla, 15th Army will force the Amur River in the region of the mouth of the Sungari River, destroy the enemy defending the Sugarian and Fuchin Fortified Regions, and subsequently advance on Fuchin with the main force on the east bank of the Sungari. Then develop the offensive in the direction of Chiamussu and Harbin. A portion of the Army forces will defend a 240 kilometer section of the front. [Ref. 99:p. 181]

Mamonov's plan developed the main axis of attack along the Sungari river. The 361st and 388th Rifle Divisions would cross the Amur river supported by the 1st Brigade of the Amur Flotilla. This crossing would take place in the Leninskoye and Voskresenskoye sectors. The 1st Brigade would then remain in area to further aid amphibious crossings of the Amur. The 2nd Brigade of the Amur Flotilla was to transport the 630th Rifle Regiment across the Amur from Nizhe-Spasskoye. [Ref. 99:pp. 181- 185]

General Mamonov established a joint command post for the 15th Army and Amur Flotilla at Leninskoye. An alternative floating command post was then deployed along with a mobile naval repair facility on the Amur river. On 8 August, the 1st Brigade of the Amur Flotilla deployed to Leninskoye and the 2nd Brigade deployed to Nizhe-Spasskoye. All was made ready for the impending attack. [Ref. 99:p. 185]

The attack began at 0100 on August 9. The 1st Brigade supported the amphibious assault of Tartar island on the 9th. For two days, the 1st Brigade struggled to ferry sufficient supplies for advancing Soviet ground forces across the Sungari. Soviet steamships and Army pontoon units

assisted to speed the crossing. On August 10, Gen. Mamonov ordered the 1st Brigade to support the seizure of Fuchin which was then achieved by the morning of the 11th. [Ref. 99:pp. 185-191]

The 2nd Brigade assaulted Fuyuan in the initial assault on August 9. After Fuyuan fell, the 2nd Brigade along with the 630th Rifle Regiment systematically secured the cities of Chinteli, Otu and Kaintsi. Between August 10 and 13, the 2nd Brigade ferried supporting forces across the Amur at Leninskoye. [Ref. 99:pp. 194-194]

On August 13, Gen. Mamonov ordered the 1st and 2nd Brigade to form up for an assault on Japanese forces at Chiamussu. With the 1st Brigade landing the first echelon assault and the 2nd Brigade following with the main assault group, Chiamussu fell to the Soviets by the end of August 14. [Ref. 99:pp. 194-195] Sanhsing and Harpin surrendered by August 20 [Ref. 100:p. 32].

5. Soviet Analysis

This operation is an example of how detailed Soviet planning responds to success. When battlefield conditions are anticipated and Soviet forces rapidly achieve their missions, the operation gains momentum. Rear Admiral Devyaterikov describes the actions of the Amur Flotilla in a 1985 Morskoy Sbornik article. He finds no fault with the combat action. He argues that the Flotilla cooperated well with the Soviet ground forces. In fact, according to Devyaterikov the operation would not have been possible without the participation of the Amur Flotilla. Ships of the Flotilla provided rapid transit to all key Japanese defensive positions as well as making maneuver possible in flooded and swampy terrain. [Ref. 100:pp. 29-33]

C. THE SOVIET VIEW OF THE NAVAL OPERATION

These historical cases are not intended to provide an objective historical record of events. Instead, they are developed from Soviet sources in order to describe how they view the historical employment of naval forces. It is said that the Soviet Navy can conduct both independent and combined operations. How did these operations fit into the conduct of World War II?

The Soviet Baltic Fleet anti-SLOC operation was an independent operation. It was carried out concurrent with the German siege of Leningrad and the conduct of Soviet and German ground operations. This is not to say that the operation was unaffected by the conduct of war in the Baltic States. Quite the contrary, all the major warships of the Baltic Fleet were assigned to the defense of Leningrad. They essentially became artillery units. Baltic Fleet aviation units were diverted from supporting deployed submarines in order to carry out missions in support of Soviet ground troops. Yet, the conduct of the anti-SLOC operation remained independent and proceeded at its own pace.

The coordination of the 15th Army and the Amur Flotilla was a combined action within the Second Front's Manchurian operation. As such, it is comparable to a combined operation. Here naval forces were subordinated at all levels to ground unit commanders. The commander of the 15th Army took operational control of the Amur Flotilla. Army division commanders took control of the Amur Flotilla brigades. The Amur Flotilla essentially fulfilled the role of a combat support unit.

This does not mean that the Soviets do not view the naval contribution to be important. They clearly state that the 15th Army's assault could not

have been successful without the aid of the Amur Flotilla. It does suggest, though, that the Soviet's view naval forces as a means of overcoming water obstacles in a ground operation. When the water obstacle is large, then an amphibious operation is called for. When the water obstacle is small, river Flotillas or Army pontoon units will suffice.

The actions of the Amur Flotilla also suggest that the pace of the naval action is directly tied to the conduct of the ground action in a combined operation. The independent Baltic Fleet operation lasted six months. The Amur Flotilla support lasted only 11 days.

There are several limiting factors in drawing conclusions on the Soviet view of naval operations today. The primary complicating factor is the introduction of nuclear weapons onto the modern battlefield. Also very important are improvements made in communications, reconnaissance and intelligence collection, aircraft and missile technology. In addition, the Soviet Navy is much larger and more capable than it was in World War II.

The tasks assigned to the Soviet Navy have changed as naval technology has advanced. In the book, Soviet Naval Operations of the Great Patriotic War 1941-1945, the Soviet Navy is portrayed as having conducted or participated in : [Ref. 6]

- Amphibious Operations;
- Anti-amphibious Operations;
- Defense of SLOCs;
- Anti-SLOC Operations;
- Defense of Naval Bases;
- Artillery Support of Ground Forces; and

- Establishment of Defensive Minefields.

Of these operations, only the SLOC, anti-SLOC and minefield operations were conducted independently. All others were conducted as combined operations.

Naval analysts Bryan Ranft and Geoffrey Till suggest that in 1954, the Soviet Navy began to view the primary naval threat as surprise nuclear attack by NATO aircraft carriers. This was followed by the Western deployment of ballistic missile submarines beginning in 1960. [Ref. 101:p. 94] As these new naval threats emerged, the independent missions assigned to the Soviet Navy grew to include anti-carrier operations, anti-SSBN operations and operations against enemy ASW forces.

The Soviet view on the employment of naval force has certainly evolved since World War II. There are indications, however, that the basic Soviet view of the naval operation may not have changed. For example, the employment of the Soviet Navy is still confined to independent and combined operations. Also, Soviet naval articles continue to portray operations from World War II as examples of the employment of the principles of military art.

If this is true, then the Soviet view of the modern battlefield still envisions the war as being conducted within a wide swath of land generally referred to as the front. Combat actions which are conducted in proximity to the front are integrated into Soviet combined-arms operations. This places all combat action in the front area under the firm control of the Soviet Army. Operations which are conducted outside of the front area are viewed as independent operations. These independent operations, while

important, are viewed as combat actions separated from the front both in space and time.

V. EXPLORATIONS INTO SOVIET NAVAL OPERATIONAL ART

The scientific structure of Soviet military science creates tremendous opportunities for students of Soviet naval art. Soviet concepts of military organization, planning and combat extend vertically through the somewhat artificial constructs of strategy, operational art and tactics as well as horizontally across the services of the Soviet Armed Forces. The existence of a strong unified Soviet military strategy embodied as it is in the Soviet High Command and General Staff ensures that these vertical and horizontal linkages remain strong.

An analyst should take advantage of this rigid theoretical framework and look both horizontally and vertically for information to fill gaps in his or her knowledge of Soviet naval affairs. While probing into the uncharted waters of Soviet naval operational art, one must often draw preliminary conclusions on the basis of scant information. An unprepared analyst might be tempted to continually ask the question, "How would I resolve this problem if I were a Soviet commander?" This type of analysis is called mirror imaging. A better method of approach is to carefully extrapolate Soviet ideas along these horizontal and vertical links. This way preliminary conclusions will be based upon Soviet ideas rather than being biased by the perceptions of the individual analyst. This raw product can then be refined as new information comes to light on the subject under study.

To illustrate this point consider the question of how a Soviet naval staff would establish a communications network to support a naval operation.

Given the limited amount of information available on communications in Soviet naval literature, the analyst should begin to look elsewhere for examples of Soviet communications structures. Figure 15. shows how a Soviet motorized rifle battalion (MRB) organizes its communications in the field.

In order to begin the extrapolation, the sample data is first reduced to the basic principles which govern its construction. In the case of the MRB communications network, several features stand out.

- Vertical lines in the net represent organizational entities and horizontal lines represent inter-organizational radio communications.
- Two general types of communications are designated networks. First, there are command nets where senior echelon commanders maintain communications with their subordinates. Second, there are combat support nets to facilitate the dissemination of coordination, technical support, etc.
- The Chief of Staff of the senior echelons monitors the communications of his commander.
- Supporting combat arms (i.e., the artillery battalion) provides coordination at the senior echelon level, then directs the activities of its subordinate forces on separate nets.
- Reconnaissance, although technically a combat support service, is given special importance. It feeds battlefield information directly to the senior commander.

Using these basic characteristics, the analyst can then postulate a Soviet communications net for the conduct of a Soviet naval operation. The determining factor in constructing the communication net is identifying the organizational structure of the Soviet naval forces.

Consider the following scenario. The Soviet Pacific Fleet commander is preparing to attack an approaching U.S. carrier battle group containing two

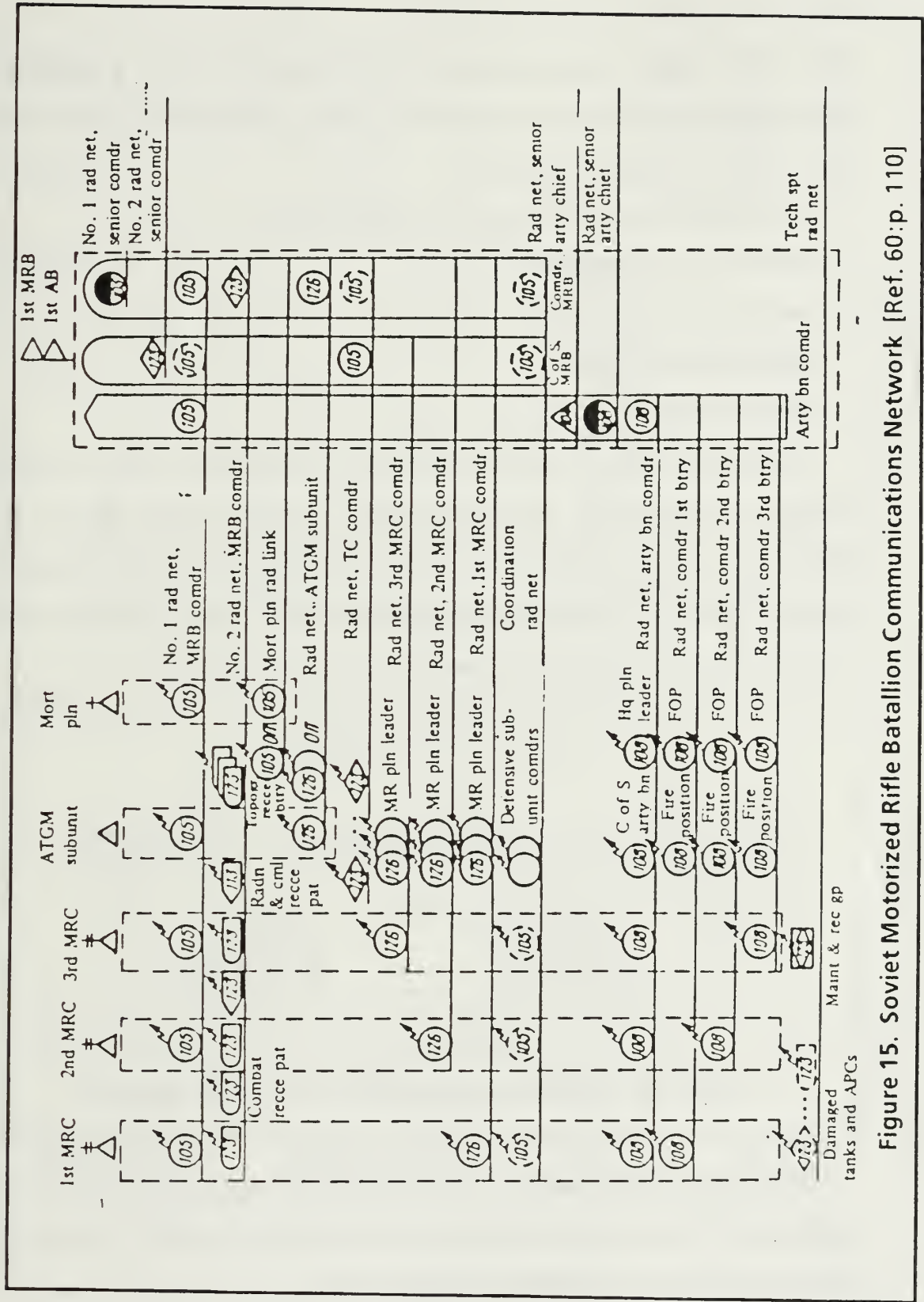
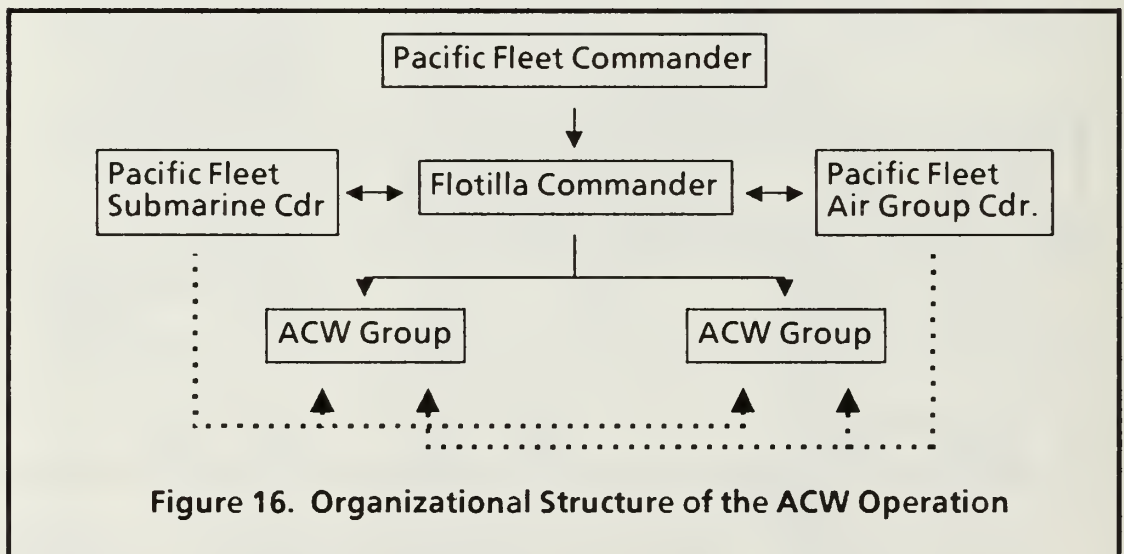


Figure 15. Soviet Motorized Rifle Battalion Communications Network [Ref. 60:p. 110]

CVNs. The Pacific Fleet commander's operation plan forms a detached flotilla consisting of two air supplemented anti-carrier warfare (ACW) task forces each consisting of:[Ref. 102]

- One bomber Unit (20 Aircraft with Fighter Escort);
- One CGN, CG, or major DDG;
- Two DDG, FFG, DD, FF;
- One SSGN or SSG; and
- Two SSN or SS.

The organizational structure of such an operation would have to support the echelonment of command from the Soviet Pacific Fleet to the ACW Task Force commanders. This structure would also have to include the support provided by the combat arms of Soviet Pacific Fleet submarines and aircraft. Figure 16. proposes such an organizational structure.



This basic structure makes it possible to construct a communications net based upon the characteristics discovered in the MRB network. Figure 17. show what such an extrapolation would look like.

With this "straw man" communications network, it is now possible to look for information which will refine the extrapolation. Admiral Navoytsev's comments noted earlier in the discussion on coordination imply that control of Soviet submarines is atypical because of unique problems in submarine communications [Ref. 31:pp. 22-23]. Review of the MED definition for "submarine screen" provides further evidence of a needed change in the extrapolated communication structure:

Mode of group employment of submarines, consisting in their regulated deployment on the enemy's route of movement, ensuring maximum probability of his detection (destruction). Elements are specified (coordinates of screen center, formation, spacings between submarines, running depth, heading, duration of tack, etc.), which ensure proper formation, formation change, and coordinated maneuvering by the submarines. **Lack of mutual communication among submarines submerged is a specific feature of the submarine screen. Control of each boat is effected from the fleet command center.** {Emphasis added} [Ref. 103]

This new information facilitates refinement of the "straw man" fleet communications network. The submarine communications portion of the net is altered so that each submarine is controlled directly from the fleet level. With that adjustment made, the fleet communications net for the proposed operation would appear as in Figure 18.

Thinking in terms of extrapolation can help the analyst phrase questions to more productively guide his or her research. For example, a current question regarding Soviet naval operational art asks what the new Soviet term, combined-fleet operation (*obshaflofskaya operatsiya*), means. This term has appeared only in the 1983 MED and has not been subsequently described in the journal *Morskoy Sbornik* [Ref. 104]. How can extrapolation help to examine this term?

First, the following information is provided by the MED in its description of combined-fleet operations. [Ref. 104]

- This operation is conducted by combining the actions of several branches of service, combat arms and special troops. Specifically, by actions of fleets and flotillas of different force organizations.
- The combined-fleet operation requires establishment of its own command authority.
- The operation seeks to accomplish a large aggregate of interlinked strategic and operational missions of different types.

Since the definition for combined-fleet operations is combined within the citation for combined-arms operations, a strong conceptual link exists between the two [Ref. 104]. The next step is to identify characteristics of Soviet combined-arms operations which then can be extrapolated to the Soviet Navy.

The Soviet combined-arms operation is a complex form of operation. The definitions of both independent [Ref. 18] and combined operations [Ref. 20] list themselves as components of the combined-arms system of warfare. The SME definition of independent operations suggests that ground warfare contains characteristics which prevent the Soviet Army from conducting independent operations. This definition states that only the Soviet Navy, Air Force and Air Defense Force can conduct independent operations [Ref. 18]. The interesting questions now become:

- What prevents the Soviet Army from conducting independent operations?
- What has changed which requires the Soviet Navy to consider conducting combined-fleet operations?

To answer the first question, examine the independent operations which the Soviet Navy has been assigned. For example, consider the anti-

ASW operation. Could the Soviet Army conduct a similar operation on land, i.e., some sort of operation to destroy enemy anti-tank units? No, the Soviet Army cannot form a grouping for that singular task because so many other tasks must be performed in the same block of space and time. The Soviet Navy can conduct independent operations precisely because, heretofore, naval groupings could be formed to achieve a single task within a block of space and time.

By shifting this line of logic to the Soviet Navy, the significance of the second question now becomes apparent. In the Soviet view, the naval environment is changing somehow such that the pursuit of one task (ACW, ASW, SLOC interdiction, etc.) will conflict with each other within the zones defined for naval operations. Since the shift is not due to a physical or geographical change, the only remaining possibility is that the technological or material base of naval warfare is somehow changing the naval combat environment.

There is no topic which has fired the imagination of Soviet military authors more than the developing technology of "reconnaissance-strike" weapon systems. Reconnaissance-strike (recce-strike) weapon systems combine the functions of reconnaissance, guidance, data collection and analysis and strike with automated communications. The Soviet Navy considers both the U.S. Tomahawk and Harpoon missile systems as recce-strike weapons, especially when they are augmented with the reconnaissance capabilities of a U.S. E-2 Hawkeye carrier based aircraft. These weapons systems are attributed with the destructive power of tactical

nuclear weapons and, therefore, in quantity are expected to cause a qualitative shift in the character of modern warfare. [Ref. 105:pp. 20-26]

The Soviets note the following as the effects of introducing recce-strike systems into the naval combat environment: [Ref. 105:pp. 20-26]

- The destructive capabilities of individual strikes will increase dramatically.
- The automated control centers which support these weapons system will be deployed near the command posts of tactical commanders, preferable on airborne platforms.
- The high precision and long range of these weapon systems will cause the size of strike groups to decrease and the number of groups to increase.
- The scope of naval battle will increase to the scale of the reconnaissance system which will cause operational commanders to play an important role in the direction of tactical actions (primarily strike).

This Soviet description of a changing naval environment dovetails nicely with the creation of the combined-fleet operation. On one hand, the Soviet Navy must counter an increasingly threatening enemy navy with dispersed formations of small strike groups. The Soviet operational commander will have to combine the tasks of protecting Soviet forces, destroy enemy forces and prevent the enemy's nuclear attack into a single operational plan and command structure. For example, as more and more U.S. submarines are equipped with TOMAHAWK cruise missiles, the Soviet operational commander must combine the tasks of protecting the Soviet homeland form nuclear attack with protection of Soviet SSBNs. The increased complexity of these tasks require the Soviets to construct increasingly complex naval operations, such as the combined-fleet operations.

On the other hand, the Soviet operational commander will also be employing weapons with increased recce-strike capability. The creation of a

combined- fleet operation will expand the responsibility of the Soviet naval commander to include the accomplishment of all strategic and operational tasks within range of his reconnaissance systems.

The combined-fleet operation does not yet exist. The recce-strike weapon systems have not yet revolutionized warfare at sea. According to Soviet dialectical reasoning, recce-strike systems must first accumulate in sufficient quantity before they can cause a qualitative shift in the character of warfare. If the Soviets believe that this time is approaching, then they will take steps today to prepare for the future of naval warfare. What indications are present today?

First and foremost, the Soviet Navy has laid the keels for two nuclear powered aircraft carriers. [Ref. 106:p. 165] This represents a significant change in the pattern of Soviet naval construction whose only previous seaborne fixed-wing aircraft were vertical take-off and landing (VTOL). The new Soviet carrier could be the center of the combined-fleet operation by allowing the seaborne deployment of sophisticated airborne reconnaissance platforms in close proximity to intended zones of naval operations.

The second type of Soviet warship currently under construction is the KIROV class nuclear powered cruiser. This ship is heavily laden with modern Soviet missiles, and as such could well be intended to supply the missiles necessary in any recce-strike system. In addition, the KIROV class possesses extensive communications facilities and therefore may also serve as a command post for the combined-fleet operation. [Ref. 106:pp 172-173]

The SLAVA guided missile cruiser is a third Soviet warship currently under construction. Again, this is a weapons platform well supplied with

modern missiles. These ships have been constructed concurrent with the KIROV class. They also can fulfill the role of delivering the necessary missiles to the zone of naval operations. [Ref. 106:p. 176]

Extrapolations which focuses solely on the scientific and logical structure of Soviet naval operational art tend to overlook important non-structural factors. For instance, Edward L. Keenan in an article titled, "Muscovite Political Folkways," describes cultural traits which Russian peasants developed in order to survive in a hostile environment [Ref. 107:pp. 115-181]. The majority of the Soviet officer corps is Russian. How might these Russian characteristics influence the conduct of naval operations?

Keenan lists several Russian traits which might be useful in this investigation: [Ref. 107:pp. 119-128]

- A strong urge to maintain stability and order in his world;
- Avoidance of risk;
- Secretiveness, a mutually protective silence;
- Suppression of individual initiatives;
- The search for unanimous resolution of important issues; and
- A tendency to reward success and punish failure.

These Russian traits can be systematically compared with both the theoretical principles of naval operational art and the activities of Soviet naval planning.

For example, the Russian dependence upon consensual decision-making imbues the naval operational plan with special importance. The operational plan represents a consensus reached by the General Staff and the naval fleet

staff on how to conduct the operation. To deviate from the plan, a Russian naval officer would have to assume personal responsibility for opposing a unanimous decision concluded by many officers his senior.

This line of reasoning can be combined with the Russian application of initiative. The Soviet principles of military art urge the Russian naval officer to use initiative when changing circumstances require it and consultation is impossible. Yet, Russian cultural tradition frowns upon the exercise of individual initiative. The operational plan guides the Russian naval officer through this difficult decision by expressing the desires of his operational commander. As long as the basic concept of the plan remains sound, the Russian naval officer is able to exercise initiative in changing various details of the plan. If the concept of the plan no longer corresponds to the combat situation, then the Russian officer will experience difficulty in reaching a decision on what to do.

These techniques of extrapolation and cultural investigation present only coarse pictures of Soviet naval operational art. As new information comes to light, the clarity and resolution of these pictures will improve. Keep in mind that each method of research biases its product. Extrapolation avoids mirror imaging, but is still vulnerable to the subjective conclusions of the analyst. Cultural investigations highlight long term cultural trends, but overlook important recent developments. It is by combining diverse research methods that bias is overcome. All things considered, this research has found that both extrapolation and cultural investigation provide interesting and creative tools for exploring Soviet naval operational art.

VI. CONCLUSIONS

Soviet naval operational art is not a topic often addressed in books and articles discussing the Soviet Navy. Since the end of World War II, the Soviet Navy has been steadily growing into a large and capable naval force which has become a serious maritime threat to the interests of the United States, its friends and allies. In recognition of this threat, many researchers have addressed themselves to questions concerning Soviet strategy and naval tactics. An understanding of the Soviet Navy, however, will never fully be realized until the Soviet theory of naval operational art is examined.

The Soviet Union divides the spectrum of armed conflict into strategy, operational art and tactics. Soviet strategy translates the political goals of the CPSU into military tasks to be completed by the military forces of the Soviet Union. These tasks can only be accomplished by the successful conduct of battle, both on land and at sea. The preparation for and execution of these battles is the responsibility of Soviet tactics. According to Soviet authors, the size and sophistication of the world's armed forces have grown such that single battles cannot achieve strategic tasks. The Soviet theory of operational art develops operations which organize the conduct of a sequence of battles. These operations ensure that the missions assigned by the strategic leadership of the Soviet Union are completed.

The artificial constructs of strategy, operational art and tactics are visualized by Soviet military officers as blocks of space and time. Battles are conducted in small boxes whose boundaries are defined by the size of the

geographical area which can be contested by Soviet tactical commanders and the endurance of Soviet tactical formations. Operations are conducted in boxes large enough to contain the battles necessary to achieve the assigned strategic missions. The plans for strategic employment of Soviet forces (strategic operations) are designed in boxes which represent areas known in the West as Theaters of Strategic Military Action (TSMA).

The Soviet Navy does not possess a naval strategy. Instead, Soviet naval forces are instruments of a unified military strategy. The Soviet Navy, however, does possess a naval theory of operational art and tactics. Naval operations may be either independent or combined. Soviet naval commanders exercise the most control over the conduct of independent naval operations.

Soviet naval operational art is profoundly affected by the views of Soviet military science and art. Soviet military science requires naval operations to be based upon the Laws of Armed Conflict. These laws are believed to statistically determine the outcome of battles, operations and wars. Soviet military art develops these laws into the principles of military art. These principles interpret how the Laws of Armed Conflict should be applied in the contemporary combat environment. As new technologies change the environment of combat, the principles of military art also change.

The theoretical basis of the Soviet naval operational art is founded upon elucidation of how the principles apply to the naval combat environment. This process can be thought of as occurring in two stages. First, the principles of military art are applied to the conduct of military

operations. The resulting operational principles are then examined in the environment of naval combat. The Soviet theory of naval operational art is a synthesis of these general, operational and naval characteristics.

Several unique characteristics influence the conduct of Soviet naval operations. Soviet naval theory does not propose to use naval forces to seize control of oceanic territory. Soviet naval forces primarily concentrate on the destruction of enemy naval formations. In Western parlance, this would be called a theory of sea denial. Soviet naval theory also requires that the employment of diverse naval forces in order to maximize their combat effect through the use of coordination. This coordination takes place simultaneously on land, at sea, underwater and in the air.

The principles of combat readiness, surprise, coordination and maneuver hold special meaning for the Soviet Navy. Combat readiness describes the Soviet Navy's capability to complete combat missions within specified time periods. Naval surprise relies heavily on the employment of radioelectronic combat (electronic warfare) and naval reconnaissance. Maneuver describes both the agility of forces in combat and their ability to strike enemy formations in depth.

Soviet troop control fashions these theoretical concepts into naval operations. The same basic system of planning appears to be used by all Soviet military services. In particular, the operational planning of the Soviet Navy differs only slightly from that employed in combined-arms operations. The primary difference is in the correlation of forces and means. In the organization of coordination and operational support (i.e., reconnaissance,

deception, logistic support, etc.) combined-arms and naval planning seem to be identical.

The presence of nuclear weapons at sea greatly affects the conduct of Soviet naval operations. Soviet naval operations are not characterized as either conventional or nuclear. The strategic missions assigned naval forces must be achieved whether or not nuclear weapons are used. As a result, Soviet naval operations combine the planning of nuclear and non-nuclear battles into a single operational plan. The Soviet fleet commander monitors both a conventional and nuclear correlation of forces and means. The conventional correlation measures the current ability of Soviet naval forces to achieve their missions. The nuclear correlation continually measures the outcome of a nuclear escalation. The Soviet fleet commander appears to design his operations in order to reflect both the conventional and nuclear correlation of forces.

Soviet descriptions of naval operations in World War II provide insight into the Soviet view of independent and combined naval operations. The Soviets tend to picture the ground front as the decisive locale for the conduct of war. Military operations can either contribute directly or indirectly to frontline operations. Independent naval operations indirectly support the advancement of the front. Independent operations are geographically displaced from the front and proceed at their own pace. Combined operations directly support the war at the front and have a completely different character. When naval forces support ground forces, the operation proceeds on a time schedule appropriate for ground

operations. Naval forces essentially provide a means to overcome water obstacles.

The fact that the Soviet Navy has greatly expanded since World War II suggests that the importance of independent naval operations has also grown. The strategic leadership of the Soviet Union appears to place great emphasis on destroying enemy aircraft carriers, ASW forces and SSBNs. Yet, despite this increased emphasis on the independent naval operation, Soviet naval operations are still viewed as either contributing directly or indirectly to the conduct of the war at the front.

In looking to the future, the Soviet Navy may be taking on a new role. The advance of new weapon technologies called reconnaissance-strike (recce-strike) weapons appears to be steering the Soviet Navy toward the development of a new combined-fleet operation. These new recce-strike weapons (Harpoon, Tomahawk, precision guided munitions, etc) greatly complicate the achievement of Soviet independent naval operations. Currently, Soviet naval operations are specially designed to achieve specific missions (i.e., ASW, ACW, etc.). The future Soviet combined-fleet operation expects to coordinate the accomplishment of several strategic missions within a single zone of the ocean.

This future combined-fleet operation has already influenced Soviet naval construction programs. The new Soviet aircraft carrier, KIROV and SLAVA are well suited to form the core of a combined-fleet formation. By combining aerial reconnaissance, sophisticated control centers and modern recce-strike weapons, this combined-fleet formation would enable to

Soviets to establish significant sea control areas. This may actually involve a conceptual extension of the front out to sea.

These glimpses into Soviet naval operational art suggest several exploitable opportunities. For example, the stable and systematic structure of the Soviet theory of naval operational art presents opportunities for long term competition with the Soviet Navy. The creation of centralized planning and control elements at the operational level slow down the Soviet process of translating strategic tasks into tactical missions. The U.S. naval tactical on-scene commander is best suited to take advantage of this fact. The Soviet tactical commander must continually transmit information back to an operational level for guidance. If the U.S. tactical commander is given the information necessary to make comparable decision at the scene, he will react to the changing naval combat environment more quickly and therefore more effectively than his Soviet opponent.

This advantage is multiplied when one considers the distortion which normally occurs when situational data is transmitted in war. The Soviet tactical commander must send off information and wait for a reply. The U.S. tactical commander need only receive information then make his decision.

Opportunities also exist in peacetime. The Soviet system of military science possesses a well defined internal logic. Seemingly inexplicable Soviet actions can be explained by revealing this internal logic. U.S. naval officers can work to expand their knowledge of the Soviet system of naval operational art. This knowledge will serve to aid naval officers in anticipating the actions of the Soviet Navy.

Failure to study the Soviet theory of naval operational art will result in lost opportunities. The Soviet combination of nuclear and conventional warfighting does not become important until one gains an appreciation for Soviet operational art. The Soviet combined-fleet operation makes no sense unless one understands the difference between independent and combined-arms operations. This thesis hopes to increase discussion within the U.S. Navy on the topic of Soviet naval operational art. As the Soviet Navy grows in size and capability, the U.S. Navy cannot afford to miss opportunities.

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