MEMORANDUM FOR: The Director of Central Intelligence
FROM: William W. Wells
Deputy Director for Operations
SUBJECT: MILITARY THOUGHT (USSR): The Initial Naval Operation

1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". This article examines certain theories advanced in various articles in the Journal as to the conduct of naval operations. The author contends that the specific nature of naval targets makes it impossible to combine actions against aircraft carriers and submarines into one operation. He believes that the initial naval operation will be to destroy carrier strike forces, and that aviation is the best equipped to handle this task. Detail is provided on the role of the navy in an initial strike and the initial period of a war, and associated problems in the deployment of submarines and aircraft, the capabilities and targets of the different naval forces, antisubmarine warfare and combat on the shipping lanes. This article appeared in Issue No. 1 (68) for 1963.

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

William W. Wells

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APPROVED FOR RELEASE
DATE: DEC 2004
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Summary:
The following report is a translation from Russian of an article which appeared in Issue No. 1 (68) for 1963 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". The author of this article is Captain First Rank Ye. Mamayev. This article examines certain theories advanced in various articles in the Journal as to the conduct of naval operations. The author contends that the specific nature of naval targets makes it impossible to combine actions against aircraft carriers and submarines into one operation. He believes that the initial naval operation will be to destroy carrier strike forces, and that aviation is the best equipped to handle this task. Detail is provided on the role of the navy in an initial strike and the initial period of a war, and associated problems in the deployment of submarines and aircraft, the capabilities and targets of the different naval forces, antisubmarine warfare and combat on the shipping lanes.

Comment:

Comments on the article were contained in with the same title.
The Initial Naval Operation
by
Captain First Rank Ye. MAMAYEV

Recently appearing in the Journal "Military Thought" have been articles investigating the problems of preparing and conducting naval operations. The articles raise very timely questions and by their very appearance in the Journal reflect the process going on in the development of the theory of naval art.

Naturally, there have as yet been no definitive views on a great number of important and even basic questions.

For example, the make-up of the initial naval operation, the questions of the initial strike and the deployment of the naval forces to carry it out, and the capabilities of the various branch arms of the naval forces are more frequently than not examined in a very general way; when various authors do deal more specifically with these concepts, their efforts rarely lead to the same results.

Therefore, we wish to examine the essence of certain theoretical principles that were discussed and to express our views concerning them.

The make-up of the initial naval operation. The naval operation, as is now generally recognized, represents the coordinated and interrelated combat actions of the naval forces conducted in the ocean (sea) theaters in accordance with a single concept and plan for achieving an operational or operational-strategic goal. This goal may be to destroy a grouping of the enemy's naval forces in the theater, to hamper (disrupt) his ocean (sea) shipping, and to destroy his important shore installations. There is the opinion that combat related to the defense of one's own sea lanes also may constitute a naval operation. We shall try to define the make-up of an initial operation, keeping in mind the changes that have taken place in the theory of naval art.

The make-up of the initial operation is determined by the tasks in the initial period of war; the basic tasks will be to
combat the enemy's nuclear attack means, disorganize his deep rear area, destroy the main groupings of his armed forces, and seize his territory.

If we proceed from this basis, the initial naval operation must encompass all the combat actions of the naval forces directed primarily at defeating the enemy's missile-carrying forces at sea and at destroying his important shore installations. This would seem to be sufficient, since with a knowledge of the enemy it is possible to determine the goal and tasks of the operation, its approximate scope, the composition of the forces allocated, and other features of the operation that could give a general idea of its content. In fact, however, this is far from being the case.

The distinctive nature of the targets (surface ships and submarines) to act against, the specific character of the various forces in our navy, and the essential peculiarities of their combat actions make it impossible to say how the naval forces would be employed in any single operational form, for example, in one operation. Consequently, the actions of strike submarines and missile-carrying aircraft against carrier strike large units cannot, in our opinion, be combined in one operation with the actions of antisubmarine forces against missile-carrying submarines; nor can the employment of submarines carrying ballistic missiles for actions against shore targets be regarded as the operational employment of naval forces. We shall try to prove this.

Strikes by submarines against shore targets are not, in our view, operations. The launching of several missiles from pre-calculated positions occupied by submarines in peacetime becomes for the most part merely a technically executive function: the shifting (on command from shore) from a waiting to a firing position, and the launching of the missiles at an assigned time. The fleet commander will be unable to carry out support measures connected with the breakthrough of the submarines to the firing positions, with guidance, and with reconnaissance. The submarine will carry out its task independently, without tying its actions to those submarines and aircraft targeted against carrier strike large units. Moreover, it will most likely be the Commander-in-Chief of the Navy who will exercise control of the missile-carrying submarines.
allocated to destroy with ballistic missiles enemy shore installations located overseas. Is it correct, then, under these conditions to assume that submarines carrying ballistic missiles are operating within the framework of an initial naval operation? We think that it is not correct to do so. It is more logical to assume that by carrying out the tasks given them, the submarines with ballistic missiles are participating directly in achieving strategic goals.

The picture is approximately the same with regard to the employment of antisubmarine forces at sea. In contrast to what we have already become accustomed to in looking at combat against carrier strike large units, there is a new factor of space here, and there are new targets and various types of forces whose actions are supported by a developed system of surveillance and supplemented by means of detection.

The targets and the setting in which the battle is conducted are unusual. It is sufficient to point out that missile-carrying submarines are, as a rule, concealed by an ocean depth of several hundred meters and that to search for and destroy them require a special organization of the forces and of the methods of controlling them.

Actions against submarines will also be of a distinctive nature. Submarines and aviation of the antisubmarine defense have their own operational disposition because of the special characteristics of their targets.

Moreover, the search and reconnaissance actions of the antisubmarine forces start long before the beginning of combat actions. The plan and concept for the employment of aviation and submarines against missile-carrying submarines differ from the plan and concept for employing the strike forces of the fleet. Thus, whereas combat is conducted against aircraft carriers when they carry out their offensive actions and come within range of the naval forces, combat against missile-carrying submarines must be a system of uninterrupted and regular actions.

It can be said unmistakably that combat against the enemy's submarines is more prolonged than combat against aircraft carriers from strike large units. The search for submarines starts long before the war begins, and their destruction begins.
with the initial launching of missiles by any one of the belligerents. It is impossible to determine in advance when the search for and destruction of missile-carrying submarines will be terminated. We can almost never be sure that by a certain time there will be no enemy submarines, including missile-carrying submarines, in the sea. Even if the enemy's ground forces, aviation, and naval surface forces have been destroyed, we cannot be certain that nuclear strikes by the enemy's submarines will not take place until they exhaust their nuclear reserves on board or concentrated in underwater depots. They may be able to continue for a time to carry out their tasks. Therefore, even if the actions of the antisubmarine forces have been successful, we are unable for a certain amount of time to maintain that a certain grouping of enemy missile-carrying submarines has been destroyed and the operation terminated.

In reference to the above, we also believe that the totality of the actions of the antisubmarine forces to search for and destroy underwater targets should not be considered as being within the framework of a single operation intended to destroy both the enemy's surface aircraft-carrying forces and his submarine missile-carrying forces at sea. Combat against enemy missile-carrying submarines requires the carrying out of daily systematic actions.

We believe that the initial naval operation will be the operation to destroy carrier strike large units. It will begin with the delivery of the initial strike against these large units by submarine and aviation forces which must be brought together into a specific grouping in advance. The essence of the actions in the initial naval operation lies in the destruction by the naval strike forces of the aircraft carriers forming the strike large unit. Strikes against a large unit of aircraft carriers or groups of carriers must be carried out while the carrier-based aircraft are still on the carriers. At least an attempt should be made to do so, although it will not always turn out to be possible. The war may possibly begin after the aircraft have taken off from the ship. In such cases, our forces will have to strike against aircraft carriers which have sufficient nuclear weapons earmarked for the support of subsequent aviation sorties.

In summary, what emerges from the preceding discussion is that the initial, and perhaps as of now the only, operation at
the start of a war will be the operation against the enemy's carrier strike large units. Actions by missile-carrying submarines against the enemy's shore targets across the ocean will come in the form of strikes that are coordinated with the actions of the strategic rocket forces.

In our view, combat against the enemy's submarines, including missile-carrying submarines, will not constitute an operation in the usual understanding of the word. Since the systematic actions of the antisubmarine forces do not find a place within the confines of the operational forms of the employment of forces, they will comprise a distinctive form of the operational-strategic employment of a part of the naval forces. The actions of the submarines and aviation of the antisubmarine defense should begin even before the war and continue without stopping until the war ends.

A few words about combat on the ocean lanes. There are various points of view about this in military literature. For example, some of the authors assume that an operation by the naval forces to hamper and disrupt enemy ocean and sea shipping will play an important role in undermining his military-economic potential in the initial period of war. However, it is our view that such an operation in this period will be a secondary task.¹

Another point of view is based on the fact that, thanks to reserves of materiel established in the military theaters earlier in peacetime, combat on the ocean lanes will not undermine the enemy's military-economic potential, since the results achieved at the outset of armed combat will exceed considerably what might be achieved during prolonged combat actions against shipping on the high seas when the enemy's military-economic potential would slowly be undermined. Still, combat on the ocean lanes under present-day conditions cannot be ruled out. It remains one of the important tasks of the navy, even though it is losing the significance it once had for conditions existing in the initial period of a war.

The second point of view, we believe, is more correct. However, we are unable to agree unconditionally even with this view. Its proponents make a correct assessment of combat on the enemy's ocean lanes only in terms of strategy, not in terms of operational art. For example, we cannot ignore the fact that the task of disorganizing the enemy's economy will require action not only against stationary economic targets (although this is where the main pressure will be applied), but also against economic targets of a mobile nature, that is, against sea transport. It is known that the leading member countries of NATO have at their disposal approximately 80 million registered tons of general cargo tonnage and more than 20 million registered tons of naval tanker tonnage. Naturally, ships that have been loaded in advance are able with the outbreak of war either to move out to sea or be dispersed over a large area far from the economic regions. Reserves of materiel weighing up to 100 million tons and concentrated on transports and tankers are very imposing and can play a vital role in the course of armed combat in the initial period of a war.*

There is another possible situation. Having begun on varying pretexts to move troops on the eve of the war, the enemy will be unable to finish these movements by the time the war starts and will make an effort to do so during the war. Of course, these movements of troops will not be a decisive factor strategically. The operational command, however, cannot take these movements lightly. The 100,000 men whom the Americans are thinking of lifting from the US to Europe at the outbreak of war can make a substantial difference in achieving the final goal of an initial front operation.

Therefore, it is not quite correct to maintain that combat on the ocean lanes will lose its significance without first indicating from what positions this view is being taken. Even at the outset of war a part of the naval forces, particularly the diesel-powered submarines, will have to operate on the ocean lanes in order to prevent the transport of troops to the continent, to prevent the reinforcement of any enemy grouping with forces being sealifted from other axes, to block the supply of enemy troops who have been pressed to the sea and not permit them to be evacuated from the shore, etc.

*It is sufficient to point out that during the entire Second World War there were brought into England 226 million tons of various kinds of raw materials, foodstuffs, and finished goods.
There is little basis to regard the actions of submarines on the ocean and sea lanes in the initial period of a war as an operation. This task will be given to a part of the naval forces without diverting the main element from combat against the enemy's strike groupings at sea. As for missile-carrying aviation, in this period it will have to carry out active combat against enemy carrier strike large units and will be unable, as a rule, to operate on the lanes. Because of this, combat on the ocean and sea lanes will most likely remain within the confines of systematic daily actions, and will not come to make up an initial naval operation.

The initial strike and the navy's participation in it. The initial strike is a most important act whereby the enemy is dealt a decisive blow, while subsequent actions by all the branches of the armed forces serve to reinforce the success of this strike and conclude the defeat of the enemy.

Literature about the initial strike deals to a greater degree with the actions of the rocket forces, ground forces, aviation, and the Air Defense Forces of the Country. We, however, will concentrate only on the participation of the naval forces in the initial strike without going into its targets, planning, duration, and time of delivery, which are subjects beyond the scope of the activity of the operational leadership.

There are at least two opinions on this matter. One states that the naval operation to destroy the enemy's naval forces begins after the initial strike; the other, that the initial strike against the naval enemy by the naval forces is not only part of the initial strategic strike, but the beginning of and an integral part of the initial naval operation. It is evident that these views are not alike, and that the path that will be followed in raising the level of combat readiness and combat effectiveness of the navy and the manner in which the problems connected with the building of the naval forces will be resolved, depend on what is used as the basis.

In our opinion the second point of view should be considered the correct one in determining the participation of the naval forces in the initial strike, and this is why. It is generally known that with the outbreak of war the probable enemy is counting on a surprise strike with nuclear weapons to achieve the
main goal of the war and by the subsequent actions of his troops to seize our territory. To do this, he will of course attempt within a limited period of time to employ almost all of his nuclear might. If we take into account the possible grouping of his armed forces at the outset of the war and their preparation for delivering nuclear strikes, we can assume that his naval forces alone are capable of employing approximately one third of all the nuclear reserves against the countries of the socialist camp.

Such a concentration of nuclear might in the navy on the part of the coalition of states is a decisive factor in determining the amount of participation of our own navy in the initial strike. Of course, in determining this, we must not ignore the capabilities of the other branches of the armed forces (rocket forces and long range aviation) for conducting combat against the nuclear weapons concentrated in the sphere of actions of the enemy's naval forces.

Thus, the question of the participation of the naval forces in the initial strike of our armed forces is very important and hardly abstract. In view of this, we should already have a theory developed as to how the navy can best carry out its tasks in this strike.

The initial strike of a fleet is the most decisive stage of the initial operation and of the actions of the remaining naval forces not participating in it. The carrying out of the initial strike is the main concern of the High Command of the Navy, even though it is carried out with the participation of the forces of the fleets and is organized by their staffs on the basis of directive orders received by the fleet commander from the Commander-in-Chief of the Navy. Participating in this strike are almost the entire submarine force and missile-carrying aviation.

As we conceive it, for the initial strike the naval forces will be concentrated throughout the world's oceans, and the depth of the destruction of targets, particularly land targets, will be determined by taking into account the range of the weapons on board the submarines, the quantity of forces deployed at sea, and the scope of the tasks being carried out primarily by strategic means.
As a number of authors correctly maintain, it is the selection of the targets for destruction by nuclear weapons that forms the basis of the decision for the initial strike. In its application to actions at sea, it means the delivery of the kind of strike that will result in the destruction of the greatest number of missile-carrying submarines, aircraft carriers, depots, and means of supplying nuclear weapons. This is an extremely difficult and complex task, and to carry it out will require the most reliable information about targets spread over an enormous area of the seas and oceans. In connection with this, reconnaissance assumes a special significance. A great deal has already been written about it. We wish to direct attention to only one circumstance.

The command of the fleet will never be able, as a rule, to have at its disposal all the data it requires on the overwhelming number of targets of its strike. This, by the way, is one of the peculiarities of the situation in which the fleets must operate. In spite of this, the function of the prior planning of the initial strike with its own forces is not taken away from the command of the fleet. First and foremost in this planning is the operational foresight of the commander and staff of the fleet as to where and what kind of enemy might turn up at the moment the fleet begins its combat actions. Of course, advance agent reconnaissance and then aerial reconnaissance, particularly on the eve of the strike, must play a very important role throughout the planning process.

Let us dwell on one of the main conditions for carrying out the first strike -- the deployment of the naval forces. We will note that it can proceed in different ways and that it is determined mainly by the availability of time, which is calculated from the moment the threat of war increases to the time the submarines (precisely the submarines) move out to the areas of combat actions, and subsequently also to the firing positions.

The fleet will be capable of carrying out the tasks which are intended for it if its forces are successful in deploying in advance. This applies equally to all the submarine forces, including even the nuclear-powered submarines. We can say without exaggeration that the success of the first strike depends on when the submarines are operationally deployed to the ocean.
and sea areas from which the enemy is able to employ his carrier-based aviation and to deliver nuclear strikes from his missile-carrying submarines.

Therefore, how to interpret what is meant by the deployment of our forces is a matter we cannot be indifferent to. Until recently there was no doubt that a part of the submarines should be deployed already in peacetime, and that a part could be in transit at sea in the process of deployment when the war started. But now, apparently, there is no way that this can be made to fit in with the idea of the initial strike, which is to disrupt or at least weaken the enemy's nuclear strike by employing the naval forces. We believe, therefore, that we must reject as soon as possible the earlier concept of deployment, since if at the outset of the war the submarines do not succeed in moving out to the firing positions, the enemy will have the most favorable conditions for delivering a strike from the sea against targets in our country.

Under operational deployment of forces we must now understand the prior deployment of submarines and antisubmarine forces in waiting areas or directly in the areas of impending combat actions, so that in peacetime there is already a sufficient number of submarines and antisubmarine forces at sea to ensure the carrying out of the tasks of the initial strike.

It is, of course, difficult to fulfill this condition. In practical terms this kind of deployment means that there must constantly be at sea not a portion of the submarines, but the main complement of them; to limit ourselves to means on alert, as the Americans now do, seems to us to be impossible. It is sufficient to point out that it would require approximately ten days to deploy submarines for an initial strike from Northern Fleet bases, for example, against targets on the North American shore. If the prewar situation should become complicated rapidly, the sudden beginning of combat actions would rule out the participation of missile-carrying submarines in an initial strike against targets on the enemy's overseas shore.

Therefore, we believe that several submarines should be assigned to each important stationary target on the enemy's territory that is to be destroyed in the initial strike by the submarine forces. They have to be on constant alert in shifts for
as long a time as possible. In this case, the submarines acquire real strength for carrying out operational-strategic tasks at any time as soon as the need arises. Thus, under present-day conditions, the combat readiness of the submarine forces is determined not by the number of submarines ready for combat actions, but by the number of them deployed in the areas of probable combat actions.

In this connection, the question arises as to which submarines it is desirable to have for the initial strike. It would seem that the task of delivering the initial strike is feasible for all missile-carrying submarines, and that even the slow-moving diesel-powered submarines carrying ballistic missiles are able to employ their weapons successfully against the shore. However, this is not the case. Because of the slow speed of the diesel-powered submarines, approximately two thirds of the time that they are autonomous is spent on deployment from the bases, moving to the area where the positions are located, and returning to the bases. And only a relatively small part of the time remains for them to stay in position. The result is that about a third of the submarines at sea can be in position at the moment the initial strike is delivered, and two thirds of them, even though they are in the ocean rather than at the bases, will be unable to participate in the initial strike.

Therefore, we doubt that it is realistic to assert that in the event of a sudden outbreak of war, all the submarines that are out at sea in peacetime will be able to participate in the initial strike. This is a delusion. We cannot count on the effective employment of all the diesel-powered submarines for carrying out tasks at sea.

Of course, we could increase the number of submarines able to participate in the initial strike. However, to do so, we have to know when the war will begin or whether the moment at which some submarines are due to relieve others at the positions will coincide with the start of the war. However, we cannot count on this; chance cannot be the basis for calculating the employment of forces in an initial strike.

We believe that nuclear-powered submarines will carry out the task of the initial strike better than diesel-powered submarines. Their power to weight ratio grants them a practically
unlimited stay at sea. The submarine is able to remain in position for months in any ocean area in the world and not experience the need to return to base. Its contact with the base is occasioned mainly by the need to relieve the personnel who require rest. Consequently, with a periodic change of crew, this kind of submarine can be kept almost indefinitely in position in the ocean. The advantage of this is obvious: serious mistakes are avoided in determining the times for the deployment of forces from the bases; there is rather easily ensured a high degree of readiness of the submarines to deliver an initial strike; and finally, what is the most important from an economic point of view, two to three times fewer nuclear-powered submarines are needed than diesel-powered submarines to strike the same number of important targets on land.

Thus, only the nuclear-powered submarines give the greatest guarantee for delivering a timely strike against the enemy when the latter intends to start a war. Even if they were to be armed with the same missiles as the nuclear-powered submarines, the diesel-powered submarines would still not always be able to employ their weapons successfully in an initial strike against stationary targets on land.

The deployment of submarines intended for warfare against carrier strike large units must be handled in another manner. It is true that one single deployment formula cannot be given for them. In making a decision to deploy submarines, we should keep in mind that in order to employ their aviation, the carrier large units will have to approach the targets to be acted against at a distance equal to the tactical operating radius of their aircraft. Therefore, the nuclear-powered submarines do not always have to be in position in areas where the aircraft carriers may appear. While the carrier strike large units are moving out of their bases and are in transit at sea, the nuclear-powered submarines will be able to carry out their deployment. It is true that for this is required reliable reconnaissance, particularly satellite reconnaissance of the type which the US is currently attempting to carry out for its own use, as well as air reconnaissance using TU-95R aircraft.

Reconnaissance over the ocean by TU-95R aircraft can and must be carried out in peacetime, without violating, in so doing, the airspace of the countries lying adjacent to the ocean basin.
It seems to us that long range aviation, which has TU-95R aircraft, should already be striving for a more intensive implementation of such flights. Without prior training for flights over the ocean during peacetime, aerial reconnaissance by long range aviation means may turn out to be insufficiently effective in wartime. Therefore, very serious attention should be given now to reconnaissance flights by long range aviation over the Atlantic and Pacific oceans. The capability of TU-95R aircraft to carry out in a timely and correct manner the task of reconnaissance over the ocean plays an important role in disrupting an enemy nuclear attack from the sea.

Still other variations are possible in setting the time for the beginning of the deployment of submarines against carrier strike large units. For example, the continued presence of two to three enemy carrier strike groups in the North Atlantic or in the North Sea should undoubtedly necessitate the moving of submarines into these areas of the sea theater of military operations.

It may be desirable to carry out the type of deployment whereby our nuclear-powered submarines move up toward the bases where the aircraft carriers are located, wait for them to come out, and follow them relentlessly, maintaining reliable contact with the aircraft carriers. If this is done, the submarines are able to attack the main ships of the carrier strike large unit immediately after receiving the order. If, on the other hand, diesel-powered submarines are deployed against the carrier strike large unit, they will have to move out of the bases to the area of the impending combat actions long before the beginning of the war, take their positions, and, shifting slightly toward the course of the carrier strike large unit upon the commands from the shore flag command post, wait for the ships of the large unit to enter their zone of combat actions. If at this time the submarines receive an order to employ their weapons, they will under favorable conditions be able to deliver a strike against the enemy ships. If such an order is not forthcoming, then their repeat contact with the carrier strike large unit is a matter of chance. Considering all that has been said, we believe that nuclear-powered submarines should comprise the first strike-reconnaissance echelon, while the diesel-powered submarines should be in the second echelon and committed to action in order to develop the success gained by the first
The deployment of naval aviation to deliver an initial strike against carrier strike large units does not present a particularly complex problem. Its capability of appearing in the target area four to five hours after receiving the order to carry out a strike requires a high degree of readiness for combat actions. In this connection, it is important to note that the airfield basing system of naval aviation must provide for the dispersal of the missile-carrying, reconnaissance, and antisubmarine aviation. It is extremely necessary to have alternate airfields that are unknown to the enemy and to accumulate materiel and technical means, including ammunition and fuel, at these fields in peacetime.

There are various opinions regarding when aviation should occupy these airfields. At the exercises conducted in 1962, the command of the fleets strove (but not always) to place their aviation at the new airfields as soon as the operational situation sharpened as a result of the introduction of hypothetical situations. We cannot always agree with such decisions.

In our view, it is completely unnecessary to shift aircraft to alternate airfields when the situation prior to the war is deteriorating. To carry out the tasks of the initial strike, we can also fly from the main airfields, since the antimissile defense system is organized in such a way as to make a timely detection of means of attack that are in flight and to warn our aviation, including our missile-carrying aviation, about an incipient enemy armed incursion. True, it has to be taken into consideration that the warning system will not always provide a timely warning. Still, shifting over to new airfields, particularly in a situation when the moment of the beginning of combat actions is not known, will enable the enemy to discover the new disposition of the aviation, and the rebasing of the aviation will not change the substance of the matter, but will result instead in so many additional measures connected with the shifting of aviation units to the new airfields that all the staffs and troops will be working on carrying them out.

Moreover, shifting to alternate airfields will decrease the radius of the aircraft, since these airfields, as a rule, are

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located somewhere in the rear areas at relatively great distances from the shore. This can have a negative effect on carrying out the initial strike. Therefore, operational deployment in a period of threat (if there is one) does not have the same significance for aviation as it has for the submarine forces. Under conditions of a high degree of combat readiness and of correct actions by the operational leadership, aviation can be used in a timely manner to carry out the tasks of the initial strike from those airfields on which it is located in peacetime.

We shall note in passing what we believe is another serious special feature of the utilization of aviation in the initial strike. It consists in the fact that, when referring to missile-carrying aviation, which is fully prepared for take-off irrespective of which airfields it is positioned at, we should not speak only of moving it out from under a strike. With even indirect indications that a war may begin, it is always necessary to put missile-carrying aviation into the air and to direct it toward the detected naval enemy. To guard against provocation, we must indicate for the missile-carrying aviation units lines over our territory or at sea to which they will immediately proceed after take-off. They will be permitted to cross these lines only after receiving orders from the commander of the fleet. The advantage of doing it in this manner is obvious. If, let us say, for some reason the commander of the fleet should forbid that these established lines be crossed, the aircraft can remain in the air for a time until the situation is clarified and then act as the commander of the fleet will direct.

The matter of deploying antisubmarine submarines, aviation and ships against submarines armed with ballistic missiles can be resolved more simply. In our view, the antisubmarine forces already in peacetime should take under their control areas where the enemy's missile-carrying submarines may appear. It will be too late for antisubmarine forces, especially submarines, to be deployed from bases when the threat of war arises. In addition to the fact that they need a comparatively great amount of time for the very process of deployment, they will need still more time to detect the enemy submarines. And this, as is known, is extremely difficult to do.

Averting a nuclear strike against our territory from under the water depends to a great extent not on how long before the
Beginning of combat actions the forces will be deployed, but on how successfully the advance search for enemy submarines will be carried out under water. The ideal situation would be for our antisubmarine submarines to follow relentlessly every submarine of the probable enemy that leaves its base, and to destroy them on receiving permission to do so from the commander of the fleet. We would be able to do this if the submarines of the antisubmarine defense were able in peacetime to establish reliable contact with enemy submarines and pursue them at sea.

And, finally, the last matter -- the role of the navy in the initial period of a war. The main forces of the navy, as is indicated in military literature and confirmed by the practice of the operational training of the fleets, are the submarines and aviation. Nevertheless, it is often stressed that submarines have immeasurably greater capabilities than aviation in combat against carrier strike large units, missile-carrying submarines, and shipping. The point has been reached where they have begun to speak of the submarine operation as the naval operation of the future. But meanwhile, submarines are far from being capable of carrying out all tasks with equal success.

We agree that submarines are a very promising branch arm of the forces. Moreover, the fleets have already accumulated some experience in using them. The exercises conducted last year showed what enormous capabilities submarines have. Aviation and surface vessels have no lesser capabilities for carrying out the same tasks intended for submarines. And this was convincingly demonstrated at the same exercises. We shall point out several characteristics of the naval forces which for some reason have received insufficient attention in print, but which in reality are of great importance in armed combat in the initial period of a war. We shall do this with respect to three tasks covered earlier (the destruction of the carrier strike large unit, combat with enemy submarines, and the carrying out of combat actions on the sea lanes).

In combat with carrier strike large units, submarines are able to achieve great successes. But, to do so, they really have to "hang on" to the aircraft carriers. Without this very vital condition, not to speak of the difficulties of deployment, they cannot count on success. The diesel-electric submarines will be unable "to hang on" to the aircraft carriers. They will come in...
contact with them if the carrier large unit "touches" them. Otherwise, these submarines are doomed to a long period of inactivity.

The situation is better for nuclear submarines. However, they too, as was seen above, must be at sea, must come into contact with the target prior to the outbreak of war, and must not let it out of sight until permission comes from shore to employ weapons.

The task of "finding the target and constantly holding on to it" is not an easy one. During the FALLEX-60 exercise, the average speed of the passage of carrier strike large units from bases on the Atlantic coast of the US to the Norwegian Sea was from 11 to 18 knots. In the area of the combat actions of the submarines, the speed increased up to 30 knots. This will be the approximate speed when carrier aviation takes to the air. How then will the submarine "hold on" to this kind of large unit of aircraft carriers? The submarine, after all, proceeds at the same speed as the ships being pursued and also constantly runs the risk of being detected by forces of the antisubmarine defense, which in time will be able to more effectively search for submarines under the water no matter what their speed and how deeply they are submerged.* In addition to all this, before the attack the submarine will still have to carry out at least an elementary maneuver. Thus, the question arises: how likely is it that the submarine, after detecting the target, will be able to follow it relentlessly and destroy it at the required moment? Naturally, there is no complete guarantee that the submarines are capable of carrying out this task. There is still another circumstance, which, even though it is not directly involved, sheds light on the role and place of submarines in combat against carrier strike large units. This is the fact that the success of the submarines depends on their capability for timely deployment. In special literature these kinds of expressions can be found: "if the submarines succeed in deploying ahead of time in the ocean, they will be able to deliver a strike against the enemy"; or, "for a timely strike, the submarines must be deployed in advance". Thus, deployment is a bottleneck in the activity of submarines, which has to be given serious consideration.

* In dealing with the long-range aspects of this problem, one cannot assume that the means of searching for and destroying submarines will always lag behind the demands made on them.
Aviation is able to carry out the task of destroying carrier strike large units in a different manner. An air large unit requires only a timely signal for a sortie and it will deliver its strike, the power of which will be sufficient to put the carrier strike unit out of existence. All of this will require only the several hours needed for the aircraft to fly to the area of combat actions. Even the arguments that aviation is able to use its weapons only when the aircraft carriers enter its zone of operations, or that aviation will be unable to remain for long in the holding zones, and that it is too dependent on the condition and availability of a network of airfields, and on weather conditions as well, do not diminish the importance of aviation in destroying carrier strike large units.

We should note, by the way, that it will most likely be submarines that will deliver strikes against the aircraft carriers at the moment that the latter appear in the zone of operations of our aviation. It could hardly be otherwise, since the operational radius of carrier-based aviation is less than the radius of our missile-carrying aviation, and the aircraft carriers must necessarily approach the targets at distances from which their aircraft will be able to operate. Therefore, for the most general incidence of the outbreak of war (aircraft carriers deliver a strike simultaneously with the other branches of the armed forces) the first argument is not vitally significant in determining the role of aviation.

Similarly, we cannot recognize as being substantive the argument that aircraft put into the air prematurely may be making a sortie for nothing, since they are not capable of remaining for long in the holding zones. This argument loses its validity if the operational leadership is able, when the situation becomes more complex, to put the aircraft into the air in good time and take advantage of the excellent possibilities inherent in aviation. Moreover, it is considerably simpler to determine the time for putting aircraft into the air than it is to establish, several weeks before war begins, when the submarines should leave their bases and go out to sea.

In our view, only the third argument is a really important one. We have in mind the dependence of aviation on airfields and its vulnerability at these airfields. However, even this does not diminish the significance of aviation as a force capable of
carrying out highly effective actions against targets comprising the enemy's nuclear strength at sea. The basing of an aviation large unit at two or three airfields and the availability of alternate airfields that are unknown to the enemy significantly raise the survivability of aviation. This survivability also increases with the appearance of aircraft that do not require airfields with a man-made hard surface. At the same time, the dependence of aviation on the system of basing is determined mainly by the degree to which airfield servicing measures are implemented for it. The greater the attention given to the construction of even just a minimal number of alternate airfields, the greater will be the guarantee of safeguarding aviation in the event of a surprise enemy attack.

As concerns the effect of the weather, it is known that aviation is becoming more and more independent of it.

Thus, despite certain shortcomings in aviation, it is completely justified to regard it as the leading force in carrying out the task of destroying carrier strike large units at sea. This characteristic of aviation must be developed in every way possible.

A few words about the destruction of missile-carrying submarines. Currently the greatest hopes for successful combat against submarines, primarily missile-carrying submarines, are being placed on antisubmarine submarines. Reference here is made to the concealment of their actions, and thus to their ability to strike an underwater target by surprise.

We are not going to dispute this contention, since it is sufficiently convincing. We shall note only two circumstances.

First, with the outbreak of war only nuclear-powered submarines, as a rule, will be capable of conducting combat against the enemy's submarines. Before the outbreak of war, they will be able to establish contact with an enemy submarine and follow it relentlessly. Because of its slow speed, the diesel-powered submarine will not keep up with the nuclear submarine of the enemy; nor can we count on its necessarily detecting a missile-carrying submarine in firing position. Moreover, there is altogether only a 20 percent probability of a diesel-powered submarine making an attack sortie against a
nuclear submarine, while the possibility of a nuclear submarine attacking the same target is close to 60 percent.

Thus, to avert an initial (from the sea) nuclear strike by enemy submarines, it is necessary to have mainly nuclear antisubmarine submarines, and in numbers no fewer than the missile-carrying submarines which the enemy has at sea. This being the case, it is absolutely essential that each of our submarines establishes contact with an enemy submarine that leaves its base in peacetime.

Secondly, since the antisubmarine defense aircraft have equipment aboard for tracking underwater targets, they will be able to keep a submarine under constant surveillance and destroy it on signal. To do so, the aircraft must have access to basic information about the enemy submarines. This can be provided by any antisubmarine defense submarine, including the diesel-powered submarine, which is located in areas through which enemy missile-carrying submarines must pass. By carrying out the functions of an observation post, the antisubmarine submarines will be able to establish a reliable, continuously operating line for the detection of underwater targets. But the task of destroying the detected submarines must be assigned not only to nuclear antisubmarine submarines, but also to aircraft, helicopters, and high-speed submarine chasers.

Consequently, in combat against the enemy's submarines, it is necessary to clearly divide functions between the submarines and aviation. Their coordinated actions are a guarantee for successfully disrupting an initial nuclear strike against our territory from the sea. True, special equipment for searching out submarines at any depth must be created for aviation. This problem is waiting for a solution. Moreover, this same kind of equipment is needed for antisubmarine submarines. The existing search equipment (sound locators and sonar) has to be improved.

And, finally, the task of combat on the ocean lanes. This can be carried out most successfully by submarines, including diesel-powered submarines. Reconnaissance tasks should be assigned to aviation, while missile-carrying aircraft should be allocated only sporadically for action against enemy shipping at sea. The main complement of aviation should be targeted on combating enemy strike forces, irrespective of whether they are
delivering an initial strike, supporting their ground forces, or carrying out the task of protecting ocean shipping.

Such, in our view, are the role and place of the branch arms of the navy in carrying out large-scale tasks at sea.