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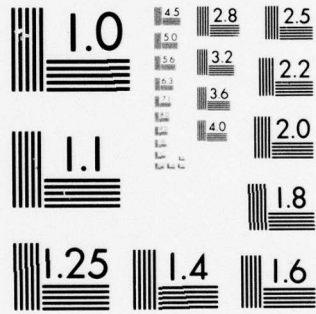
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6 CHANGES IN SOVIET NAVAL FORCES,

10 David Kassing

14 CNA - Professional Paper No. 183

11 November 1976

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This material was prepared for inclusion in "General-Purpose Forces: Navy and Marine Corps," a chapter of *Arms, Men and Military Budgets: Issues for Fiscal Year 1978*, published in May 1977 by the National Strategy Information Center.

20 November 1976

CHANGES IN SOVIET NAVAL FORCES

Twenty years ago, Admiral Sergei Gorshkov took command of the Soviet navy. Those twenty years have seen remarkable changes in the capabilities, intentions, and operations of the Soviet naval forces.

In a recent book, Seapower of the State, Admiral Gorshkov suggests some of the ideas that underlie the transformation of the Soviet navy under his command.¹ Though the book considers all aspects of seapower, it concentrates on the history and development of the Soviet navy and concludes with a lengthy discussion of "problems in the art of naval warfare." We cannot determine the accuracy of what Gorshkov says about the missions and capabilities of the Soviet navy, but we can see whether what he says is consistent with the development of Soviet forces and operations.

The main idea of Gorshkov's book can be used to frame a discussion of the Soviet navy, though interpreting what he says is tricky business. He uses a wholly different lexicon from ours. Often, key terms are not clearly defined, and many of the examples he cites to buttress his case confuse more than they clarify. For a long time, therefore, specialists have been debating the meaning of a series of articles that Gorshkov published in a Soviet naval journal in 1972.² Seapower of the State, which borrows heavily from these articles and extends and refines them somewhat, will undoubtedly lead to further debate about Gorshkov's precise meaning.

¹Sergei G. Gorshkov, Morskaya moshch' gosudarstva (Military Publishing House: Moscow, 1976), 463 pages. I am indebted to James M. McConnell for translating the most important sections of Gorshkov's book. Citations of McConnell's translations of portions of the book are labeled: "[Gorshkov: p. ---]."

²The Morskoi sbornik articles have been translated and published as Red Star Rising at Sea, trans. T.A. Nelly, Jr. (Annapolis, U.S. Naval Institute, 1974). For a discussion of the substance and context of the 1972 Gorshkov series, see R.G. Weinland, R.W. Herrick, M. McCWire, and J.M. McConnell, "Admiral Gorshkov's 'Navies in War and Peace,'" Survival, Vol. XVII, No. 2 (March-April 1975), pp. 54-63.

In making his case, Gorshkov also borrows several arguments that are familiar in the West. He argues, for example, that, as the Soviet economy grows, the seas grow in importance for trade in raw materials, energy, and food. The book frequently invokes a threat from the navies of the West and states a need for a balanced fleet to deter or defeat them. Finally, Gorshkov declares that the navy is important to the protection of Soviet interests abroad in peacetime. The counterparts of these ideas have, of course, been major themes in Western discussions of the size and structure of navies.

But Gorshkov does not make one of the most familiar distinctions that guide Western analysts, the division of missions, forces, and weapons between strategic and general purpose. And he rarely distinguishes between nuclear and conventional weapons. There is, then, no discussion of "escalation" of warfare at sea from conventional to nuclear weapons. This not only suggests something about the Soviets' view of war, it also adds to the difficulty of interpreting their missions and force capabilities.

The new book contains little that is explicit about today's Soviet navy. The evidence that is cited is mainly historical, though some contemporary developments in the West are discussed. But several basic points emerge quite clearly:

- o The importance of seapower is increasing; it is tied directly to the strength of the economy and to defense capabilities. The navy is the most important element of seapower.
- o The Soviet navy has been assigned primary wartime missions and has acquired the forces to execute them.
- o The Soviet navy has accomplished a profound "qualitative transformation" through the introduction of modern military equipment.
- o Any future combat in which fleets are involved is expected to be short and decisive. Consequently, peacetime preparation, fleet readiness, and speedy communications are highly important.

- o The Soviet navy has also served in peacetime, in support of foreign policy. Of all the armed services, the navy is the one most suitable for protecting state interests overseas.

Admiral Gorshkov cites historical examples of naval warfare, doctrine, and technical developments -- not current data about the Soviet navy. It is important to compare what Gorshkov is saying with what the Soviet Union is actually doing.³

SEAPOWERS OF THE SOVIET UNION

Gorshkov concludes his review of the scope and importance of seapower with the statement that:

"... with seapower that is growing steadily, our country is acquiring ever greater potential for further developing its economy and science, for raising the living standards of the Soviet people, and for strengthening its defense capabilities."
[Gorshkov: p. 101]

He goes on to say that seapower supports foreign policy, making possible the strengthening of trade and cultural ties, and carrying economic aid to developing nations.

As defined in the Seapower of the State, seapower comprises, not only the navy, but merchant shipping, fishing, and oceanographic research as well. Table 1 provides some information about Soviet activities in the last 3 categories; all of these efforts are strong and growing.

This activity does not mean that the Soviets are now dependent on the seas. They may never be, for they have vast natural resources and a tradition of economic self-sufficiency. The Soviets' foreign trade is small in relation to the size of their economy, and nearly half of this trade is with their Eastern European neighbors.⁴

³Data about Soviet ships, unless otherwise cited, is drawn from various editions of Jane's Fighting Ships.

⁴Seaborne trade may be more important to the Soviets' Warsaw Pact allies. Seaborne imports into those countries are nearly three times as great as into the Soviet Union and have been growing at a 10 percent annual rate since 1970.

TABLE 1
SOVIET SHIPPING, FISHING, AND OCEANOGRAPHIC RESEARCH

	<u>Amount</u>	<u>Percentage of world activity</u>	<u>Annual rate of growth</u>
<u>Merchant transport</u>			
Number of ships	2,312	6.8%	4.1%
Gross tons of shipping	12,020 thousand	3.7	4.2
Cargoes loaded in USSR (metric tons)	118 million	3.6	2.5
Cargoes unloaded in USSR (metric tons)	22 million	0.7	12.0
Personnel	About 90 thousand	NA	NA
 <u>Fishing</u>			
Number of ships	4,219	22.3	6.7
Total ship displacement (gross tons)	5,937 thousand	45.6	8.2
Fish catch (metric tons)	9 million	13.7	6.2
Personnel	About 250 thousand	NA	NA
 <u>Research on the ocean</u>			
Number of ships	117	30.5	5.4
Total ship displacement (gross tons)	243 thousand	54.6	9.6
Personnel	About 8 thousand	NA	NA

NA = information not available.

Sources: Data on number of ships and gross tonnage is taken from Lloyd's Register of Shipping Statistical Tables, 1970 and 1975. Cargo--handling data, covering both dry cargo and tanker loads, comes from Organization for Economic Cooperation and Development (OECD) Maritime Transport series for 1972 and 1975. Fishing data is drawn from OECD Review of Fisheries, 1975. Personnel data is taken from U.S. Congress, Senate Committee on Commerce, Soviet Ocean Activities: A Preliminary Survey (April 30, 1975).

The Gross National Product of the Soviet Union is estimated at a little more than half that of the U.S. But the Soviets' seaborne imports of dry cargo amount to only 7 or 8 percent of corresponding imports by the United States, and their imports of tanker cargos amount to only 3-4 percent.⁵ Clearly, the Soviets depend far less on seaborne trade than we do.

Gorshkov discusses the importance of ocean resources in general terms only. He sees a direct link between seapower and a strong economy. Yet, though he cites many examples of materials that are to be found in abundance in the sea -- including salt, uranium, manganese, and magnesium -- he does not tie them to Soviet economic interests.

What is more, his discussion of undersea oil, gas, and coal resources is keyed to the Persian Gulf, the Caribbean, the South China Sea, and the West Coast of the United States, all remote from the Soviet Union. Since the Soviet economy is generally self-sufficient, his purpose seems to be more to suggest Western vulnerability than to identify new economic potential for the USSR.

In maritime transport -- tankers, freighters, bulk carriers, container ships, and passenger ships -- the Soviets rank fourth in numbers of ships and eighth in total tonnage among the fleets of the world.⁶ The size of the merchant fleet, whether measured in ships or in gross tonnage, grew at an average rate of more than 4 percent a year from 1970 through 1975. Yet this fleet carries only a little more than half of the Soviet Union's total seaborne trade.

Much Soviet shipping is employed in "cross-trades," that is, in carrying cargo between foreign ports. For example, Soviet ships carry about 5 percent

⁵In 1974, the Soviet Union imported 12 million metric tons of dry cargo, the U.S., 155 million.

⁶In total merchant fleet, the Soviet Union ranked 6th with 19,235,973 gross tons. See Lloyd's Register of Shipping Statistical Tables 1975.

of the Pacific trade of the United States; they are also active in the North Atlantic. According to recent reports, they carry about 7 percent of all our ocean-borne commerce. The Soviet Union exports shipping services and acquires hard currency to finance imports. Soviet merchant shipping is used to deliver military and economic assistance to allies. Shipping to North Vietnam and Cuba provides clear examples of the use of the merchant fleet to support Soviet allies. This merchant shipping also promotes diplomatic contact with the Third World and yields some intelligence. Merchant ships are sometimes subordinated to naval command to provide logistic support or to participate in naval exercises. Moreover, the Soviet Union is acquiring more ships for cross-trades -- and some of these ships have military uses.

In particular, the Soviet merchant fleet has ordered large numbers of additional "roll-on/roll-off" ships, for delivery in 1977. On such a ship, as the name suggests, trucks and other vehicles can drive directly into the hold and, upon arrival, drive off the ship, thereby reducing turn-around time in port. Soviet purchases of such ships constitute 32 percent of the total orders for vehicle carriers on the order books of the world's shipbuilders.⁷ About these ships, Gorshkov says, "The role of such ships in military shipping has grown still further ... as a result of recent development."

Gorshkov's discussion of the importance of sea transport to the West is quite pointed. He notes that "some 90% of the total volume of foreign commercial shipping consists of raw materials and food" and points out that petroleum shipping has been growing about 10% annually. He assigns to the Atlantic Ocean primary importance for trade in peacetime and logistic support in wartime. But the Pacific Ocean, he says, is of "great importance" for economic and military shipping, and the Indian Ocean is playing an "even

⁷OECD Maritime Transport 1975 (Paris: OECD, 1976), p. 67.

greater role." There is no doubt that Gorshkov recognizes the importance of the sea lanes to the U.S. and our allies in Europe and Asia.

The fishing fleet is the second component of seapower. The Soviet fishing fleet (table 1) is the largest in the world, and its catch is second only to Japan's. Between 1970 and 1975, the tonnage of the Soviets' fishing fleet grew at an annual rate of more than 8 percent. Over the same period, their catch grew at a 6 percent rate. Actually, the Soviet market share grew from 11 percent to nearly 14 percent of the total because the world's fish catch grew more slowly.

Fishing is an important source of protein for the Soviet Union, providing 13-15 percent of the animal protein in the Soviet diet and about 6.5 percent of all the protein. And, as with maritime transport, the fishing industry is an important source of foreign exchange.

Gorshkov concludes that, "The further development of the fishing fleet will make a considerable contribution to providing the Soviet people with food products." But he also notes that "fishing ships were widely used within the navy to carry out military and combat missions ..."

Oceanographic research is the third non-military component of Soviet seapower. Gorshkov asserts that "the Soviet Union does not intend to give up its position as the leading oceanographic power of the world." Table 1 shows the statistical basis for the claim. In terms of research ships registered with Lloyd's of London, the Soviet Union clearly dominates, with nearly a third of all the ships and more than half of all the tonnage categorized as research ships.

Oceanographic research supports Soviet naval operations, though Gorshkov does not mention the connection. Instead, he refers to the demands of the economy and the need to discover new fishing grounds. But Soviet oceanographic research activities have clearly military applications in support of surface and subsurface naval operations.

Summary

The Soviet Union has developed a major interest in shipping, fishing, and research in the world's seas. Though these activities are enormous, both absolutely and relatively, the Soviet Union is not, to any significant degree, dependent on the seas for its economic well-being. Gorshkov does not say it is, but he does say that these activities will help the growth of the domestic economy and will also support foreign policy. He is clearly aware that the West is far more dependent on seaborne trade. Within the system of seapower as he defines it, Gorshkov assigns "dominating importance to the navy."

WARTIME NAVAL MISSIONS

The importance of naval forces in determining the outcome of modern warfare is perhaps the main message Gorshkov seeks to convey. Though victory in war requires proper coordination of all armed forces, the importance of each of the armed services varies with changes in conditions. Changes since World War II have increased both the absolute importance and the relative importance of the navy. The new conditions he mentions most are:

- Adoption of an "ocean strategy" by the West
- Deployment of strategic nuclear missiles aboard submarines.

These changes, in turn, require a rethinking of the missions and forces of the Soviet navy.

Two general categories are developed to help this rethinking: "fleet against fleet" and "fleet against shore." At first glance, these categories seem to coincide with Western concepts of sea control and projection of power ashore, but they do not. Nor do they match the Western definition of naval missions as either general purpose OR strategic. Gorshkov's two categories do not seem to coincide with any of the traditional Western ways of defining naval missions.

Gorshkov constructs what he calls "the overall system of naval operations against the shore" and potentially includes all naval missions in it:

"under present conditions, forms and methods for employing forces that are directly connected with operations against the shore will have a growing influence on all spheres of confrontation of naval forces." [Gorshkov: p. 354]

These naval operations dominate all others, including operations "directed toward gaining control of the sea."

Naval operations against the shore, then, are the main mission of the Soviet navy. What is included? There can be no doubt that Gorshkov regards strikes with nuclear ballistic missiles launched from submarines against an enemy's "military-economic potential" as the single most important naval mission. Since strategic forces are discussed elsewhere in this volume, however, they will not be examined here. It should be pointed out, though, that Soviet strategic programs reflect this priority. In the decade mid-1966 through mid-1976, the Soviets' strategic bomber force declined somewhat and their land-based missile force grew at an annual rate of 10.4 percent -- but their seabased missile force grew at an annual rate of 23 percent. As a result, the proportion of Soviet missiles based at sea grew from 16 percent to 36 percent. About a quarter of the Soviet Union's deliverable warheads are now based on submarines.⁸

The line between fleet-versus-fleet operations and fleet-versus-shore operations is hard to draw. For example, Gorshkov declares that "the traditional fleet-against-fleet operations ... are being employed today in a new, decisive area -- in naval actions against the shore." He adds that "such traditional missions as interdicting the sea communications of the enemy and protecting our own communications" are now an important part of efforts to undermine an enemy's military-economic potential.

⁸Data taken from The Military Balance, 1976-1977 (London: International Institute for Strategic Studies, 1976), pp. 75, 106-107.

In Gorshkov's thinking, strategic and tactical operations support each other:

"... command of the sea is a factor ensuring the success of the operations of forces prosecuting the basic tasks. Moreover, the navy's successful accomplishment of these basic tasks ensures further strengthening of its command of the sea ..."
[Gorshkov: p. 379]

He says more pointedly that general purpose naval forces will support the operations of Soviet strategic missile submarines:

"Surface ships remain a basic and often the only combat means for supporting the deployment of the main strike forces of the navy -- submarines." [Gorshkov: p. 319]

He says the submarine could not insure its own survival in World Wars I and II. Now, however, technical improvements have made it possible to coordinate the operations of submarines and surface ships.

Support can be given to strategic missile submarines (SSBNs), whether they are deploying or on station. Gorshkov is acutely aware of the geographic handicap under which the Soviet navy operates. The enemy, he says, has the "favorable positions," can concentrate his efforts on "strategically important zones," and is "establishing control over straits and narrows." Obviously, if Soviet SSBNs are to sortie successfully in wartime, they must overcome this opposition; in this, Soviet general purpose forces would have a role.

Soviet tactical forces could also counter enemy antisubmarine forces in the open ocean. The Gorshkov book suggests that the Soviet navy may withhold some -- or all -- of its strategic missiles from the first strike and use them instead as "a powerful means of militarily achieving political objectives during war." In other words, seabased strategic missiles may be held in reserve as threats, to bring the war to a successful political conclusion. This line of argument emerges from several historical examples of the use of navies for "military-political tasks":

"history gives us examples of how navies, by their presence or even by virtue of their existence in the possession of one of the belligerents, have had a definite and sometimes very substantial influence on the outcome of an armed struggle ..., merely by posing a potential threat to keep the war going ..."
[Gorshkov: pp. 249-250]

If SSBNs are to be withheld, their survivability will clearly be enhanced if they are supported by other naval forces. Since U.S. submarines are the main threat to the Soviet SSBNs, Soviet attack submarines and surface combatants are the main supporting forces. The surface ships will probably have to deploy well beyond land-based air cover, and will therefore require their own anti-air defense. Every new class of large antisubmarine ships the Soviets have constructed since 1962 carries its own surface-to-air missiles.

Despite the importance of combating the enemy fleet, this type of action is secondary to naval operations against the shore. In the category of "fleet against fleet," the mission of disrupting or blunting attacks by the enemy's seabased strategic weapons is said to be "more important." He asserts that the Soviet "navy must be capable of countering this real threat" from ballistic missiles, submarines, and carrier-borne aircraft. But he does not claim the capability. In fact, when discussing airborne antisubmarine warfare, he says detection of submarines "presents many difficulties." Fleet-against-fleet operations will take place far from the Soviet Union and will require readiness, mobility, and endurance.

This leads to the question of "control of the sea." Naval forces, Gorshkov says, take a long time to build and train. This has two consequences in the battle. The first is that the large forces needed to gain sea control in wartime must be developed and trained in peacetime. For the same reason, the victor in the battle for sea control can exploit his victory "for a rather long time."

According to Soviet naval science, sea control is necessary so that naval forces can accomplish their missions, but only for specific places and times. Success in sea control permits naval forces to carry out their primary mission. The second purpose of sea control is to make it hard for an enemy to accomplish his missions. Thus, Soviet sea control efforts are also aimed at protecting the homeland from attack by seabased missiles and carrier aircraft.

Both purposes are clearly important, and developing this kind of naval warfare "is one of the important tasks of naval science."

There is yet another kind of mission to consider. Gorshkov's book devotes a surprisingly large amount of space to the role of navies in "local wars of imperialism." Many pages are devoted to demonstrating that the U.S. and its allies have assigned to their navies an important role in limited war. Navies, he says, are the "best suited to carry out broad-scale military actions against distant countries ..." Moreover, navies can remain ready for operations in international seas and thus avoid political complications. Gorshkov illustrates the effects of several kinds of naval forces in local wars: amphibious landings, attack carrier operations, naval gunfire, blockades, and military sea transport.

Why does Gorshkov devote so much attention to this type of warfare? Does the Soviet navy have a limited war mission? When the admiral is summarizing his views on the problem of balancing naval forces, he repeats what he said as early as 1967, that navies have a major role in local wars:

"Experience in these [local] wars shows that the navy plays an enormous role in them and can be utilized (within the framework of the employment of conventional weapons) for accomplishing all the possible missions known to modern naval art and military doctrine." [Gorshkov: p. 450]

The discussion suggests that limited war operations may be becoming one of the missions of the Soviet navy. Such a mission would provide a role for the Soviets' growing amphibious capability and, perhaps, for the Kiev class carriers.

THE QUALITATIVE TRANSFORMATION

In his discussion of the development of the Soviet navy since World War II, Gorshkov points to significant qualitative change. The new navy has been shaped in response to the world political situation, the forces of the West, technical progress, and Soviet economic strength. The main directions of this qualitative transformation have been in:

- Shifting to construction of a nuclear-powered submarine fleet
- Introducing missile and nuclear weaponry
- Arming the Navy with long-range aircraft
- Introducing shipboard aviation into the Navy
- Making a qualitative change in equipment to monitor the oceans beneath the surface and in antisubmarine (ASW) forces and equipment
- Introducing diverse electronic equipment and automation in the control of weapons and combat equipment.

Examination of each of the components of the "qualitative transformation" reveals much about the capabilities of the Soviet navy today.

Nuclear Submarines

The Soviets' first nuclear submarine entered service in 1958; the decision to build it must have been made in the early 1950s. By 1966, there were 40: 13 strategic and 27 general purpose. Since then, the Soviets have commissioned another 99, bringing the total to 139. For the past ten years, they have been adding nuclear submarines at an average rate of 10 a year. A little more than half of these new nuclear submarines are general purpose.

In the 1950s, the Soviets built a large force of conventionally-powered, general purpose submarines, perhaps contemplating a campaign against NATO's sea communications. These submarines are now being replaced by nuclear-powered ships that are both more costly and more capable. Because replacement is not on a one-for-one basis, there has been a 9 percent decline in the size of the Soviet general purpose submarine force over the past ten years:

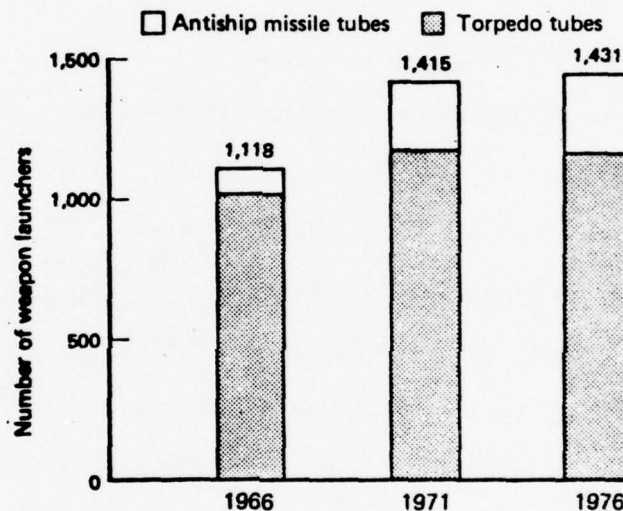
	<u>1966</u>	<u>1971</u>	<u>1976</u>	<u>Change</u>
Nuclear general purpose submarines	27	56	80	+196%
Diesel general purpose submarines	<u>259</u>	<u>237</u>	<u>179</u>	- 31%
Total	286	293	259	- 9%

The Soviets realize that nuclear-powered submarines have many qualitative advantages. First, they can remain submerged for many weeks at a time; diesel submarines must approach the surface to change their batteries. This means that nuclear submarines are far less vulnerable to antisubmarine forces. Second, nuclear submarines are generally larger and can therefore carry more weapons and more powerful sensors. Third, they can travel farther and maintain higher speeds. As a consequence, a larger proportion of a nuclear submarine force can be maintained on station at sea. Nuclear submarines are also better able to close and attack high-speed surface forces, such as carrier groups and amphibious groups.

The Soviets' recognition of these advantages has led to a substantial program of nuclear submarine construction and a substantial rise in their capability for sea control. The force of diesel-powered submarines is declining in the meantime. But the total capability of the Soviet submarine force is increasing because the nuclear-powered submarines are far more effective than the diesel submarines they replace.

Figure 1 illustrates the ability of the Soviets to deploy antiship weapon launchers -- missile launchers and torpedo tubes -- in combat. Though the size of the force has declined 9 percent, its capability, by this measure, has increased by 28 percent.

FIG. 1: SOVIET GENERAL PURPOSE SUBMARINE FORCE: DEPLOYABLE WEAPON LAUNCHERS*



*Assuming two-thirds of the nuclear submarines and one-half of the diesel submarines are deployed to combat zones.

There does seem to have been a shift in Soviet priorities concerning the construction of general purpose nuclear submarines. Since 1970, emphasis has changed from construction of submarines that are armed with both cruise missiles and torpedoes to submarines that are armed with torpedoes only:

	Mid-1966 through mid-1971	Mid-1971 through mid-1976
Carrying both cruise missiles and torpedoes	22	10
Carrying torpedoes only	7	14
Total constructed	29	24

Though the shift is clear, the reason is not. Perhaps the Soviets realize that the main threat from the U.S. Navy is from its Polaris/Poseidon submarines, rather than from its aircraft carriers, which can be attacked with antiship cruise missiles. When allowance is made for construction time, it appears that the Soviets decided to reduce the rate at which they were building cruise missile submarines before the U.S. decided to reduce its carrier force.

Missiles and Nuclear Weapons

In discussing naval missilery, Gorshkov includes weapons we call "strategic," as well as weapons we call "general purpose." Deployment of submarine-launched ballistic missiles and their effect on future conflicts is a main theme -- perhaps the central theme -- of Seapower of the State. The Soviets now have 4 strategic missile systems deployed aboard submarines, including the 4,200-mile SS-N-8, which was deployed aboard the Delta-class submarines in 1973. These missiles provide the Soviet navy with its "fleet against the shore" striking power.

For "fleet against fleet" warfare, the Soviet navy has several kinds of missiles:

- Antiship missiles launched from submarines, aircraft, and surface ships
- Anti-air missiles on surface ships for defense against air attack
- Antisubmarine (ASW) missiles on surface ships.

Today the Soviet navy is the acknowledged leader in the employment of missiles in naval warfare.

It is hard to gauge the size of the Soviet navy's inventory of missiles. But it is possible to tell how many missile launchers its forces carry. The data in table 2 suggests three points.⁹

⁹The table does not include more than 500 missile launchers on smaller combatants -- Osa boats and Nanuchka-class corvettes -- that displace less than 1,000 tons.

TABLE 2
SOVIET NAVAL MISSILE LAUNCHERS

	<u>Mid- 1966</u>	<u>Mid- 1971</u>	<u>Mid- 1976</u>	<u>Annual rate of growth</u>
Antisurface ship missile launchers:				
On submarines	156	382	438	10.9%
On aircraft	270	350	420	4.5%
On surface ships	<u>76</u>	<u>82-98</u>	<u>102-250</u>	<u>3.0-12.1%</u>
Total	502	814-830	960-1,108	6.7-8.2%
Antiaircraft missile launchers:				
On surface ships	30	122	268	24.5%
Antisubmarine missile launchers:				
On surface ships	0	2-18	3-150	--

First, the predominant missiles deployed by the Soviet navy are antiship. About half of them are deployed in submarines, the others in strike aircraft. In all, the Soviets have 9 or 10 types of such missiles now in service: 2 submarine-launched, 3 or 4 launched from surface ships, and 4 air-launched.

The second point brought out by table 2 is the uncertainty about the purpose of one of the missile systems deployed aboard some of the newer warships. On the one hand, Polmar reports speculation that the SS-N-10 launchers on new ships house "ASW missiles, possibly 'winged torpedoes.'"¹⁰ He also reports "official statements" that the tubes on the Kresta II, Kriva, and Kara carry antisubmarine missiles. Michael MccGwire concludes that it is "fairly certain" that the Kresta II and the Krivak carry ASW missiles, not surface-to-surface missiles, and that the Kara carries an ASW missile, not an SS-N-10.¹¹ On the other hand, recent editions of Jane's report that the SS-N-10 missile is radar-guided and hence unlikely to be an antisubmarine missile. The uncertainty is reflected in table 2, where the SS-N-10 is counted, first as a

¹⁰Norman Polmar, "Thinking About Soviet ASW," U.S. Naval Institute Proceedings, Vol. 102, No. 879 (May 1976), pp. 120-121.

¹¹Michael MccGwire, "Western and Soviet Naval Building Programmes, 1965-1976," Survival, Vol. XVIII, No. 5 (September-October 1976), pp. 206-207.

possible ASW missile, then as a possible antiship missile. The uncertainty is small, considering the total size of the antiship missile force. But it does affect any estimate of the capabilities of Soviet surface forces against surface ships.

The third point highlighted in table 2 is the rapid growth of the anti-air capability of the Soviet navy. The ninefold growth in the number of missile launchers points up the importance the Soviets assign to equipping their ships to operate beyond the protection of land-based air. As Gorshkov says:

"By considerably improving the defensive qualities of surface ship tactical formations, anti-aircraft missiles created conditions under which surface ships can successfully carry out their combat mission far beyond the range of their continental air defense, trusting in the reliability of their own air defense."
[Gorshkov: p. 334]

In 1966, the Soviets had only 11 ships equipped with air-defense missiles. In 1976, they have 73. Every large surface combatant that has joined the Soviet fleet since the 1960s is armed with a surface-to-air missile system.

As for ASW missiles, many Soviet ASW surface ships mount six- or twelve-barrelled launchers for antisubmarine rockets with a range of perhaps two miles. According to Jane's, only the Moskva class helicopter carriers and the Kiev aircraft carriers are armed with antisubmarine missile launchers. But the Soviets may well have as many as 150 antisubmarine missile launchers aboard their surface ships.

Clearly, the Soviet navy has been transformed into a missile-equipped force.

What kinds of warheads do Soviet naval missiles carry? The seabased strategic ballistic missiles, of course, have nuclear warheads. But does "qualitative transformation" include the introduction of nuclear warheads on tactical missiles, as well? It seems so.

Jane's Fighting Ships, Couhat's Combat Fleets of the World, and Breyer's Guide to the Soviet Navy list Soviet naval missiles and their characteristics.¹²

All agree that the antiair missiles carry conventional, high-explosive warheads. They also agree that some of the antiship missiles could have nuclear warheads, though the basis for such estimates is not cited.

Warhead type seems to be inferred from missile dimensions and operational range. These are Couhat's estimates of warhead types for each of the 19 different Soviet tactical missile systems:

Missile type	Warhead type			Unknown	Total
	Conventional	Nuclear	Nuclear or conventional		
Surface-to-air	4				4
Surface-to-surface	3		3	1	7
Air-to-surface			2	3	5
Antisubmarine	—	2	—	1	3
Total	7	2	5	5	19

Gorshkov's book reveals something of the Soviet attitude toward tactical missiles with nuclear warheads. We have already noted that he rarely distinguishes between nuclear and conventional weapons. At one point, he says:

"Today submarines and naval aircraft are the main combatant arms of our navy, and ballistic and cruise missiles with nuclear warheads are the main weapons." (Emphasis added) [Gorshkov: p. 307]

In a discussion of naval aviation, he says that "air-nuclear missile attacks against sea targets are practically unstoppable. Describing the difficulty of comparing the strength of fleets in fleet-against-fleet operations at sea, he says "missiles with nuclear weapons" create complex analytical problems. And

¹² J.L. Couhat, Combat Fleets of the World 1967/77, trans. J.J. McDonald (Annapolis: U.S. Naval Institute Press, 1976). Pp. 379-381 contain the most comprehensive data on Soviet naval missiles.

S. Breyer, Guide to the Soviet Navy, trans. M.W. Henley (Annapolis: U.S. Naval Institute, 1970). Pp. 60-66 describe earlier Soviet naval missiles.

he speaks of "missiles of various types" and "warheads of tremendous destructive power." There is little reason to doubt that the Soviet navy has planned and equipped itself with tactical nuclear weapons for warfare at sea.

Long-Range Naval Aircraft

Admiral Gorshkov says that "arming the navy with long-range aircraft" has been a main feature of the qualitative change in the Soviet navy. In 1956, when he took command, Soviet naval aviation had about 4,000 aircraft and 100,000 men. Perhaps 2,000 of these aircraft were fighters, whose purpose was air defense of warships operating close to the shore in defense of the Soviet Union. There were also bombers -- Tu-14 "Bosuns," Il-28 "Beagles," and Tu-15 "Badgers" -- that could fly longer missions (1,300 miles radius), but their effectiveness in antiship operations was low. The remainder of the naval aircraft were antisubmarine, reconnaissance, transport, and utility aircraft.

Soon after Gorshkov took over, the large fighter force was eliminated from the Soviet navy, and naval aviation concentrated instead on long-range aircraft for antiship and antisubmarine operations. Later, large numbers of Badger aircraft were transferred to naval aviation, and the Tu-95 "Bear" (with a combat radius of 3,400 miles) entered service. In the early 1960s, air-to-surface antiship missiles, resembling small, unmanned aircraft, began to appear.

Table 3 shows more recent developments in the long-range portion of the Soviet's naval air forces.¹³ The main long-range air forces, whose targets are surface ships, have grown by 15 percent in the past ten years. The antiship strike force includes aircraft equipped with air-to-surface missiles, as well as the necessary tanker, reconnaissance, and electronic-countermeasures support aircraft.

¹³ Data from table 3 was taken from the appropriate editions of The Military Balance, issued by the International Institute of Strategic Studies.

TABLE 3
SOVIET NAVAL LONG-RANGE AIRCRAFT, 1966-76

	<u>1966</u>	<u>1971</u>	<u>1976</u>
<u>Antiship strike forces</u>			
Aircraft armed with antiship missiles	260	300	310
Bombers	100	50	70
Reconnaissance aircraft	60	85	110
Tanker aircraft	<u>80</u>	<u>65</u>	<u>85</u>
Total	500	500	575
<u>Land-based ASW patrol aircraft</u>	50	100	170

The most recent change in the force is signaled by the introduction of the Backfire bomber, armed with antiship missiles. This bomber first appeared in 1969 but did not enter naval service until 1975. The Backfire will probably replace the Badgers, which have formed the backbone of the Soviet navy's anti-ship force since the 1950s; their combat radius, as we have seen is 1,300 miles. The Backfire's combat radius is perhaps 3,500 miles; the ocean areas where ships would be exposed to Soviet air attack have therefore been expanded considerably.

There has also been a substantial improvement in the Soviets' naval land-based aircraft for antisubmarine warfare. In 1966 the force consisted of about 50 old, slow amphibious aircraft, with little capability to hunt down submarines and sink them. These airplanes have now been replaced by two new ASW aircraft -- one amphibian, the other land-based -- that were put into service in the late 1960s. Both types employ acoustic detectors and magnetic anomaly detectors to search for and localize enemy submarines. The land-based "May," for example, can search for submarines for 5 hours, 1,000 miles from base.

The land-based ASW aircraft are newer, but the antiship strike force is armed with stand-off missiles. Introduction of the Backfire may portend modernization of the antiship forces, continuing the improvement in the capability of long-range naval air.

Introduction of Shipboard Aviation

Compared with other aspects of the "qualitative transformation" in the Soviet navy, the introduction of sea-based air is quite new and its extent quite limited. Several classes of Soviet destroyers that were built in the 1960s had small helicopter pads, but helicopters were generally not deployed aboard them. The Kresta I class guided missile cruiser, deployed in 1967, was the first Soviet ship to carry a helicopter hangar. The Kresta II and Kara class cruisers are also equipped with helicopter hangars.

While the Kresta I cruisers were being built, the Moskva class helicopter carriers were under construction. This ship type resembles a guided missile cruiser in that the front half of the ship mounts anti-air and antisubmarine missile systems. But the after part of the ship contains a flight deck and hangar deck capable of operating and maintaining 18 ASW helicopters. It thus represents the Soviets' first substantial commitment to shipboard aviation.

The main function of these ships seems to be antisubmarine warfare. Gorshkov says:

"Participation by helicopters in the search for submarines, for example, not only expands the field of 'vision' of the ship carrying them, but also increases considerably the ship's potential for prolonged tracking of the detected enemy, and improves the kill reliability of antisubmarine weaponry." [Gorshkov: p. 325]

The Soviet navy uses the Ka-25 "Hormone A" helicopter for antisubmarine warfare. The helicopter carries a dipping sonar and sonobuoys for hunting submarines, and torpedoes and depth charges for attacking them. It is a relatively new aircraft -- introduced in 1967 -- with a range of 160 miles and a cruising speed of 105 knots.

The second substantial step in commitment to shipboard aviation is marked by the construction and deployment of the Kiev class aircraft carriers, which are more than twice as large as the ships of the Moskva class. The first of these ships was deployed in July 1976. Like Moskva, she resembles a cruiser forward,

carrying anti-air, anti-ship, and anti-submarine missile launchers. But the additional space is devoted to aircraft. At least two more of these ships are reported to be in construction, and Jane's speculates that a force of at least 6 is likely.

Though the Kiev carriers are impressive in size, armament, and number, the really significant change is the introduction of seabased tactical air. In addition to about 25 ASW helicopters, the Kiev can carry perhaps as many as 25 vertical take-off and landing (VTOL) aircraft. The VTOL aircraft deployed with the Kiev, the Forger, is apparently a more effective aircraft than expected, with high-subsonic speed and a sizable combat radius.¹⁴ It can thus serve in several roles: fighter defense of naval forces, anti-ship strike, close air support ashore, or reconnaissance and surveillance. So far, only routine training flights have been observed; a better understanding of the Soviet navy's VTOL aircraft role waits the appearance of the Kiev in integrated fleet operations.

Introduction of shipboard aviation, a major change in the Soviet navy, is proceeding at a rapid pace; its ultimate scope is hard to determine. At the moment, it lags far behind the U.S. Navy's seabased capabilities for both anti-submarine warfare and tactical air operations. The air group on the Moskva cannot

SOVIET SHIPBOARD AVIATION

	<u>1966</u>	<u>1971</u>	<u>1976</u>
Air-capable ships	0	8	20
Helicopter capacity	0	44	87
VTOL capacity	0	0	25

¹⁴ According to Secretary of the Navy Middendorf, the Kiev carries "... a much more effective V/STOL aircraft than we were led to believe. It has a 50 percent greater radius and can carry more weapons than the Harrier." Quoted by Edgar Prina in the San Diego Union, August 20, 1976, p. 31.

The International Defense Review estimates that the Forger has one hour of on-station time at 200 miles, while carrying 4 air-to-air missiles for fleet air defense. In an attack role, carrying 3,000 pounds of bombs, it has a combat radius of 230 to 285 miles. A maximum radius of 500 miles can be achieved with a "limited combat payload." See "An Initial Assessment of the Yak-36," International Defense Review, Volume 9, No. 5 (October 1976), pp. 739-740.

search large ocean areas fast enough to be effective in antisubmarine operations, and the Kiev's air group is no match for the tactical air capabilities of modern U.S. carriers. Nonetheless, the momentum of Soviet efforts in shipboard aviation is clear, and Western naval planners face new, complicating threats.

Qualitative Changes in ASW

Gorshkov argues that the deployment of ballistic missile submarines dictated a sharp improvement in antisubmarine warfare effectiveness.¹⁵ Since existing ASW systems were hard to improve, "It was a question of developing completely new principles of antisubmarine warfare, which also brought about new requirements for antisubmarine systems."

Some aspects of the changes in Soviet ASW systems have been covered earlier in this chapter. Part of the impetus for the high rate of nuclear submarine construction is Gorshkov's recognition that "Submarines are also becoming full-fledged antisubmarine combatants ..." Table 2 showed that if the SS-N-10 is indeed an ASW missile, the Soviet surface fleet may now have as many as 150 ASW missile launchers. Finally, the deployment of ASW helicopters aboard Moskva and Kiev class ships represents a major new development for Soviet ASW.

Gorshkov suggests that detection ranges have been lengthened, that "homing" weapon systems have been improved, and that the speed and range of torpedoes have been increased. But little is known about these other dimensions of Soviet ASW capability. For example, the latest Jane's, which tabulates data about the sonar equipment of six navies, does not include the Soviets. The book also lists two Soviet torpedoes but gives no data about their design or performance. This is not surprising; operational capabilities, such as detection ranges and torpedo guidance techniques, are much harder to observe than design characteristics,

¹⁵ See Polmar, "Soviet ASW," pp. 125-129, for an up-to-date, comprehensive discussion, including "unconventional ASW."

such as ship's speed and numbers of missile launchers. It seems reasonable to assume, however, that the Soviets are improving their ASW sensors and weapons as they develop and deploy new ship and aircraft types.

Acquisition of Electronic Equipment and Automation

Gorshkov says that the "introduction of diverse electronic equipment and of automation in the control of weapons and combat equipment" is an important element in the change in the Soviet navy. As with ASW capabilities, developments are hard to observe and measure. But Gorshkov is quite emphatic about their role:

"superiority in the development of military electronics is becoming one of the indispensable conditions for military superiority over the enemy." [Gorshkov: p. 339]

And

"Today the Navy has in its inventory the latest electronic systems, ... distinguished by their great operating range, accuracy in measuring target coordinates, high reliability, and extensive automation. All of this assures, at high speeds, analyses of data acquisitions, output of target indication data and current coordinates, and optimal decisions for employing forces and weaponry." [Gorshkov: pp. 339-340]

There is no doubt that the Soviet navy makes extensive use of electronic equipment. Jane's lists 33 types of Soviet naval radars designed for early warning, target tracking, and fire control. Moreover, every new ship -- those of the Kiev and Kara classes, for instance -- carries a full set of electronic countermeasures equipment.

Gorshkov's discussion emphasizes surveillance and command and control. Press reports suggest that the Soviet Union has two separate types of ocean surveillance satellites. One, an active radar satellite system, has been used since 1967; the second is a new electronic "ferret" system to detect electronic signals from ships at sea. According to specialists, the Soviets have "a method of watching U.S. Navy maneuvers in the open anywhere on the globe,

regardless of weather and radio or radar silence."¹⁶ The Soviet military also use satellites for communications.

More to the point, in world-wide exercises in 1970 and again in 1975, the Soviet navy has demonstrated an effective command and control system. These demonstrations leave little doubt that the Soviet navy has modern, highly capable electronic warfare and command and control systems.

Summary

Changes in the equipment of the Soviet navy show clearly that the "qualitative transformation" claimed by Gorshkov has, in fact, been occurring. Looking to the future, he suggests that tomorrow's warships "will not resemble today's ships." He projects replacement of guns and torpedoes by missiles and electronic equipment. He says that future warships will need "propulsion plants of colossal power," possibly hinting at nuclear propulsion for surface ships. He adds, "To an ever greater degree, combat operations will move into the subsurface and air environments." If these predictions are borne out by future developments, the "qualitative transformation" in the Soviet navy will continue.

FUTURE COMBAT

Seapower of the State spells out the Soviet view of future combat at sea. Naval warfare, it says, will be fast-paced, dynamic, and decisive.

These points are made and supported in a variety of ways throughout the book. This view of naval war is consistent with Soviet views of war in general. For example, the book includes standard Soviet fare, recites Lenin's principles about the "art of war," and says they have been put into practice. One principle is to "be stronger than the enemy at the decisive moment at the decisive point." Another speaks of "suddenness of attacks and [of] seizing and holding the initiative," and catching the enemy while he is unaware and his troops are scattered."

¹⁶Aerospace Daily, June 2, 1976, p. 4.

Similar considerations are woven through Gorshkov's description of the development of the Soviet navy and his discussion of the "art of naval warfare." He speaks of "strike," "battle," "speed," and "time." As the following excerpts suggest, this section is studded with predictions that naval warfare will be short and sharp:

Strike. "The steady increase in the range and power of naval weaponry ... permits the accomplishment of tactical missions ... by a single unilateral action against the enemy." [Gorshkov: p. 365]

Battle. "The acceleration of tempo in the unfolding of events is introducing changes even in such a category as the battle. It will become briefer and more dynamic and productive of immediate results." [Gorshkov: p. 367]

Speed. "... the combat activity of the navy in the future will be a complex combination of simultaneous and successive combat operations, swift and brief, ending with the attainment of decisive goals ..." [Gorshkov: p. 370]

Time. "In many cases the grouping of enemy naval forces will have to be destroyed within a very short, specified time, before they can fully employ their own weapons." [Gorshkov: p. 371]

"... The growing requirement to reduce the time needed to accomplish missions ... has led to the need to maintain naval forces in readiness to deliver strikes on the enemy at once and the need for comprehensive automation in controlling these forces." [Gorshkov: p. 371]

All this suggests the importance of peacetime training and preparation for future combat. It also places great stress on command and control:

"... the navy needs the kind of communications system that will permit reliable control of its highly mobile forces, which are at enormous distances from their bases and operating in a variety of environments and in open formations extending many thousands of miles along a front and the same distances in depth. Taking into account the special features of modern war, these communications must be high-speed, constant, stable against enemy jamming, and of necessity two-way." [Gorshkov: p. 342]

A major exercise, conducted in April 1975, showed that Gorshkov's principles of naval warfare have been put into practice.¹⁷ In the same way that the acquisition of new weapons, ships, and aircraft demonstrated the "qualitative

¹⁷ Peacetime exercises do not, of course, fully reproduce wartime conditions. Training must be accomplished, opposition is only simulated, weapons are not fired, and time is limited. Capabilities demonstrated in exercises are likely to be far greater than they would be.

transformation" of the Soviet navy, an exercise that was called "Okean-75" in the West demonstrated the ability to carry out large, coordinated attacks at sea.¹⁸

During this exercise, about 220 Soviet ships were deployed, and naval aircraft flew some 700 sorties. Operations were conducted in the seas close to the Soviet Union (the Barents Sea, Norwegian Sea, North Sea, and Sea of Japan) as well as in far distant areas (the eastern Atlantic approaches to Europe, off the west coast of Africa, in the Arabian Sea, and in the Pacific, west of Guam). Several of the exercise areas (see figure 2) lie athwart the main lines of communication between the U.S. and its allies. Several kinds of naval operations were conducted or simulated:

- Surveillance and reconnaissance
- Antiship strikes
- Antisubmarine warfare
- Convoying operations
- Nuclear warfare.

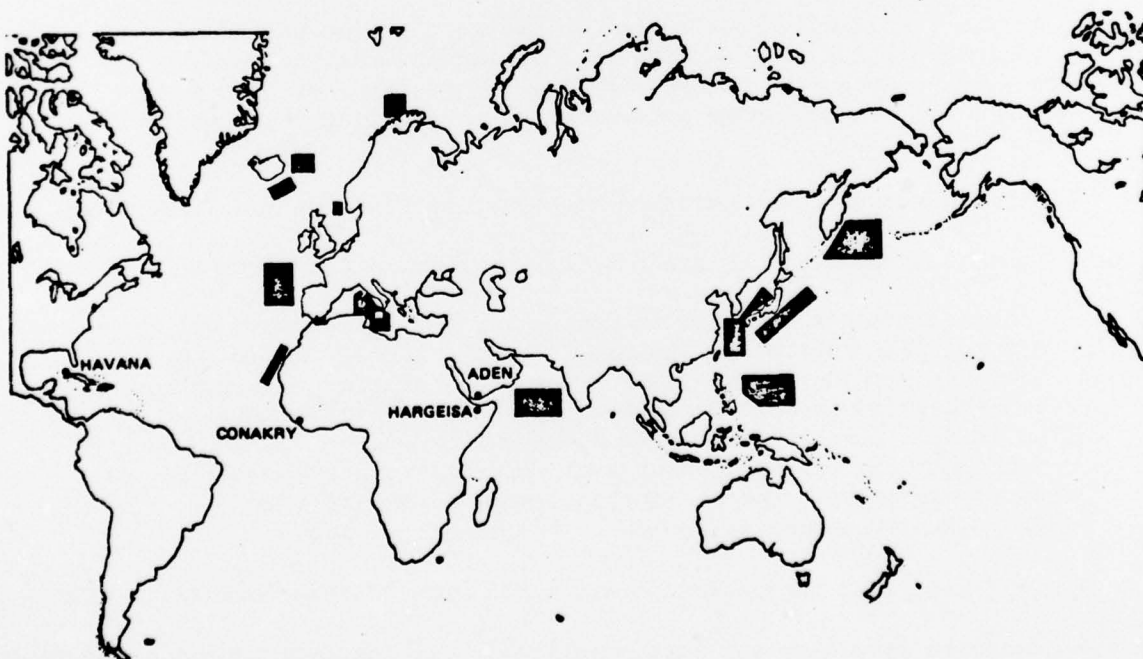


Fig. 2: AREAS OF SOVIET OPERATIONS DURING OKEAN-75

¹⁸ For a more complete description of the Soviet naval exercise, see B.W. Watson and M.A. Walton, "Okean-75," U.S. Naval Institute Proceedings, Vol. 102/7/881 (July 1976), pp. 93-97.

Though the forces began to move into position in early April, the main operations occurred in a five-day period. Three of these days were devoted to surveillance and reconnaissance, two to simulated shooting. During the reconnaissance phase, satellites and aircraft searched the oceans to locate exercise targets. Land-based aircraft flew surface or ASW search missions from bases in the Soviet Union. Missions were also flown from airfields in Havana, Cuba; Conakry, Guinea; Hargeisa, Somalia; and Aden. Surface ships and submarines also conducted surveillance.

During the strike phase of the exercise, near-simultaneous attacks were conducted in several of the exercise areas. The attack forces seem to have consisted mainly of aircraft, though submarines, too, may have been involved. Special emphasis was placed on attacks on surface shipping, but large numbers of ASW aircraft were also employed. West of Portugal and east of Japan, Soviet ships simulated convoys along important sea lines of communication to Europe and Japan. Naval forces simulated attacks on and defense of these "convoys."

This exercise clearly tested the Soviets' worldwide naval command and control system. Forces were dispersed over wide areas, and engaged in several kinds of naval operations. In the exercise, operations of different kinds of units were coordinated within individual operations, and operations in several areas were coordinated as well. The Soviet surveillance and command and control system -- not to mention the forces -- demonstrated their ability to organize and conduct brief, sharp combat.

SUPPORTING STATE INTERESTS IN PEACETIME

Throughout Seapower of the State, Gorshkov points repeatedly to diplomatic goals that the Navy can promote in peacetime:

"With the emergence of the navy onto the ocean expanses, the Soviet Union acquired a new and wider potential for using it in peacetime in support of its own state interests." [Gorshkov: p. 410]

According to Gorshkov, peacetime deployments serve several state purposes. They help safeguard friendly countries and deter attacks upon them. Visible naval deployments show the strength of the economy that produced the forces. And they demonstrate Soviet combat capabilities for all to see.

Soviet naval peacetime operations during the past decade support Gorshkov's claims. Though the Soviet navy made occasional visits in the 1950s -- to England and Indonesia, for example -- permanent peacetime deployments were not established until the mid-1960s. Then the Soviets' naval presence on the world's oceans, measured in ship-days abroad, grew rapidly, at an average rate of nearly 30 percent a year. During the 1970s, the level of overseas naval deployments has stabilized; about 120 ships are normally deployed.

These trends are clearly shown by naval combatant deployments (table 4), which constitute about 40 percent of all Soviet deployments. Between 1965 and 1970, these deployments increased dramatically; they have been essentially level since then.

TABLE 4
SOVIET COMBATANT SHIP-DAYS
ON DISTANT DEPLOYMENT

<u>Year</u>	<u>Combatant ship days</u>
1965	3,400
1966	5,100
1967	8,400
1968	12,300
1969	16,600
1970	19,000
1971	18,400
1972	19,300
1973	20,600
1974	21,300
1975	18,500

Source: U.S. Congress, Senate Committee on Armed Services, Hearings on Fiscal Year 1977 Authorizations (February 19, 1976), Part 2, p. 1183.

Soviet naval forces are now deployed routinely in the Mediterranean, in the Atlantic, and in the Indian Ocean. Though Soviet naval presence is continuous in these areas, its level varies greatly. There are also variations in the presence of the Soviet navy in other ocean areas -- the Caribbean, the South Pacific, and the South Atlantic. For example, during the Okean-75 exercise, about 100 additional ships were deployed to the various exercise areas.

Port visits are a direct way of demonstrating naval presence; they serve both diplomatic and operational purposes. Soviet forces made occasional visits in the 1950s, mainly to western European ports. Since the mid-1960s, this activity has grown steadily, and its focus has shifted. Between 1971 and 1974, the Soviet fleet visited an average of 30 nations a year, the great majority of the visits being made to nations in the Third World. Such visits help accustom host nations to the Soviet navy and sometimes lead to permanent facilities for the Soviets aboard. In turn, these facilities permit a more active role for the Soviet navy in peacetime.¹⁹

In fact, the Soviet navy has been employed to achieve diplomatic goals in peacetime. These accomplishments have been far more pointed than is implied by Gorshkov's generalities and there have been at least 20 such occasions since June 1967. In some instances, Soviet naval operations have been directed at influencing U.S. actions. In the fall of 1970, for example, when U.S. forces moved to the eastern Mediterranean during the Jordanian crisis, a countervailing Soviet force appeared on the scene. Similarly, the large Soviet deployments into the Mediterranean during the next major crisis there -- the Yom Kippur War of 1973 -- were concentrated in those areas where the U.S. Navy was operating.

In a number of other cases, however, the Soviet navy has been employed against Third World states, to help friends and coerce opponents. Between October 1967

¹⁹For a more detailed discussion of the Soviet navy's visits abroad, see Anne M. Kelly, "Port Visits and the 'International Mission' of the Soviet Navy," Center for Naval Analyses, Professional Paper No. 145 (April 1976).

and October 1973, for instance, the Soviet navy kept a continuous combatant presence in Port Said, clearly helping to deter Israeli attacks on Egypt. During 1973, Soviet naval forces transported Moroccan troops to Syria, in support of the Arab cause in the Middle East. Between 1970 and 1975, the Soviet navy maintained a regular presence of combatant ships at Conakry, Republic of Guinea, to help deter attacks from Portugese Guinea.

The most recent example of Soviet gunboat diplomacy occurred in January 1976, when Soviet warships deployed to the South Atlantic during the Angolan crisis. The Soviet Union supported the Popular Movement for the Liberation of Angola, providing both arms and logistic support. At least 4 Soviet merchant ships delivered weapons at crucial times. Soviet naval ships -- a Kresta II missile cruiser, a Kotlin class missile destroyer, an amphibious landing ship, and an oiler operating out of Conakry -- were reported near the Angolan coast. Their role seems to have been to protect the Soviet merchant ships that were delivering weapons.

It is clear that the Soviet leadership appreciates the diplomatic leverage that can be provided by naval forces in peacetime. The repeated use of naval forces to aid allies, deter attacks, and pressure opponents demonstrates that what Gorshkov says about naval support for foreign policy goals is being carried out.

SUMMARY

Before summing up this general look at the Soviet navy, it is important to note some of the issues that Gorshkov omits. We have already pointed out that he does not distinguish between nuclear and conventional (or limited) combat. He tells little about current Soviet forces or capabilities. In addition, several subjects that normally appear in studies of seapower are not considered in Seapower of the State:

- o Naval arms limitations are not discussed, though the Soviets have sometimes proposed them.

- o Overseas facilities are not discussed, although the Soviet navy uses them.
- o The costs of naval forces are not discussed.
- o There is no quantitative assessment of the Soviet and NATO navies.

The book is said to be intended for military -- presumably naval -- leaders. Since Gorshkov seems to be telling his officers how seapower can and will be employed, it is understandable that he omits such messy loose ends as these.

What Gorshkov does include, he often repeats. Our review of the Soviet navy's general purpose forces has been organized around the five main points he makes most often. To test Gorshkov's statements, we have looked at the forces and capabilities of the Soviet fleet. On the main points examined, the facts clearly support the view that Gorshkov means what he says.

the author
He says and means that use of the seas is increasingly important to the Soviets. They have acquired a modern and powerful navy, use it for diplomatic purposes in peacetime, and have assigned it important missions for wartime. Soviet planning for naval combat emphasizes quick, powerful, decisive operations as soon as war breaks out.

The Soviet navy poses far more serious problems for Western naval planners today than a decade ago.

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